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card printers

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QUANTUM

USER GUIDE

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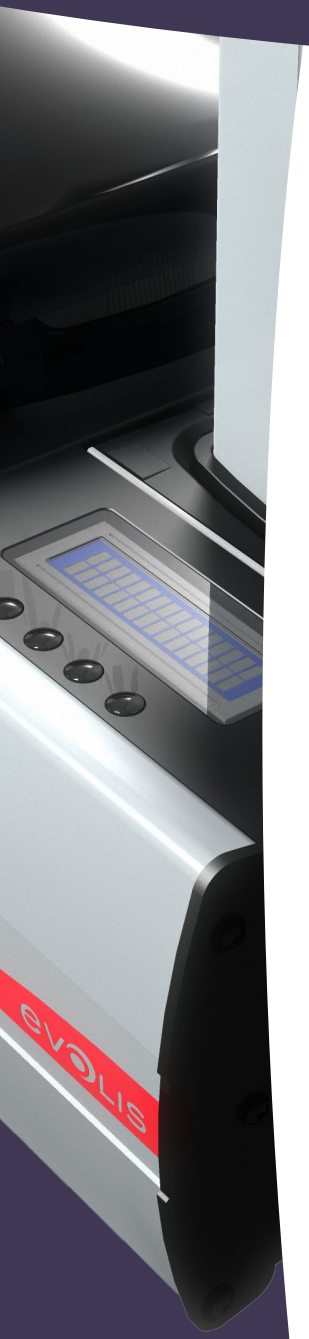
July 2011.

Ref. KU12E. Rev B0.



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Trademarks

QUANTUM is a trademark of Evolis Card Printer. All other trademarks belong to their respective holders.

Warranty

Refer to the warranty notice supplied with your printer for warranty terms and conditions and limitations.

Environmental information – recycling of end-of-life products

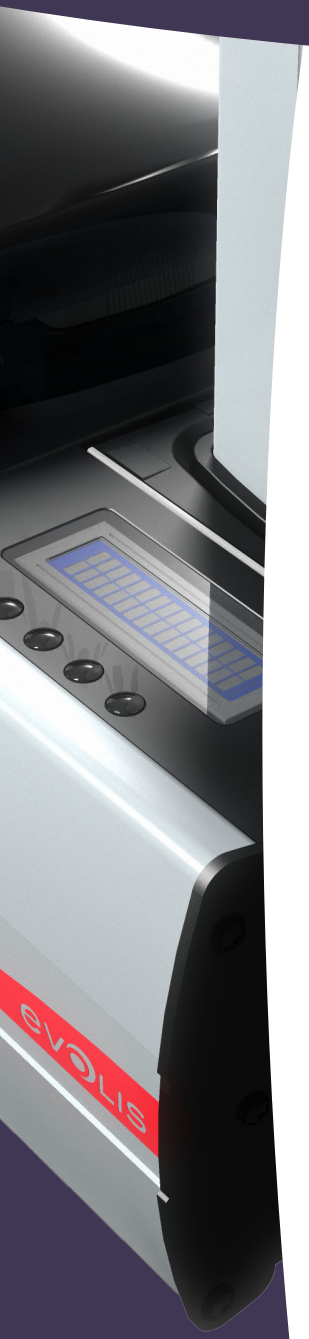
The manufacture of the equipment that you have purchased required the extraction and use of natural resources. It may contain materials that are hazardous to health and the environment.

To prevent the dispersal of such materials into our environment and reduce the pressure on our natural resources, we recommend that you use existing collection systems. These systems will appropriately re-use or recycle most of the materials of your end-of-life equipment.

The crossed-out dustbin symbol on your device is a reminder to use these systems.

If you need further information on collection, re-use and recycling systems, contact your local or regional waste management body.

Do not hesitate to contact us to find out more by visiting our website at **www.evolis.com** or by emailing the following address: **info@evolis.com**.



About your new printer

Thank you for choosing an Evolis printer.

Using your new printer, you will be able to create a wide variety of high-quality cards and badges which can be printed in various thicknesses, colours and styles. This printer uses consumables and accessories available from Evolis. For further information, visit our website at **www.evolis.com**.

Warranty registration

Please register on line at **www.evolis.com** to receive our special offers and general information.

Once on the website, click on **Drivers and Support** then on **Register your printer** and fill in all the fields, in particular stating the model and serial number found on your printer.

Getting started

The purpose of this user guide is to guide you, step by step, through your printer and how it works. Take some time to read it in order to better understand your printer and its features, and to save time during installation and use.

As with all Evolis products, a great deal of care has been taken over this manual. However, should you find an error, please let us know by emailing us at **info@evolis.com**.

Contents

The bookmarks found top left of your screen can be used to navigate between the various sections in this user guide.

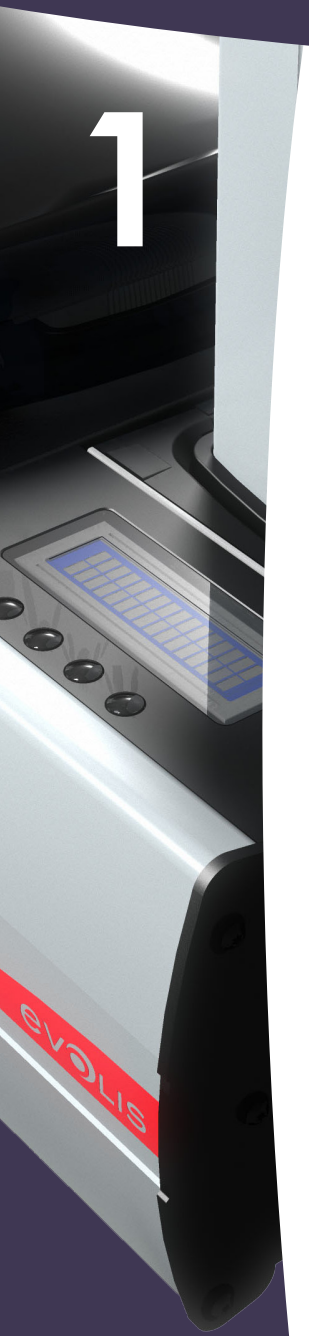
Icons

The following icons are used in this manual to highlight important information:

Information providing further details or depth about certain points in the main text.

Indicates that failing to take the recommended action is liable to damage your printer.

This symbol indicates that a video showing the procedure is available on the www.evolis.com website.



1 Getting started

1-1 Unpacking

Your printer is supplied with several accessories that we ask you to look at closely.
This list may vary depending on your location.

The printer is shipped in special packaging designed to prevent any damage in transit. If you notice any visible damage, do not hesitate to contact the shipper and immediately inform your Evolis dealer, who will tell you the procedure to follow.
Evolis takes great care over the quality of its packaging and we ask that you keep this packaging somewhere clean and dry.

You will be asked for the full original packaging (outer box, inner wedges and protective bags) in the event that the printer is returned. If the printer is returned without its original packaging and components are damaged in transit, these components will no longer be covered by the warranty. You will be charged for new packaging for shipping the printer back to you.

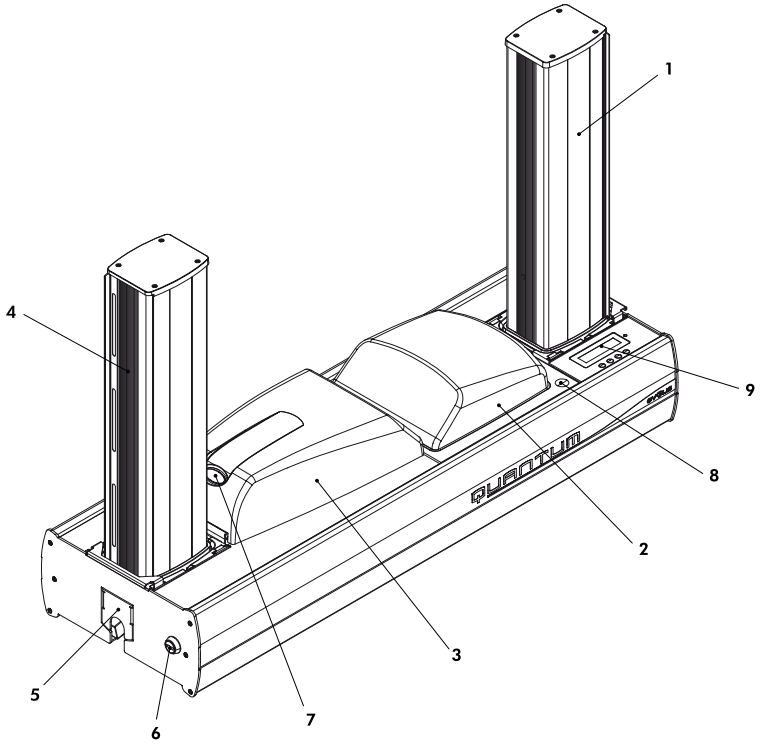
Accessories supplied with your printer:

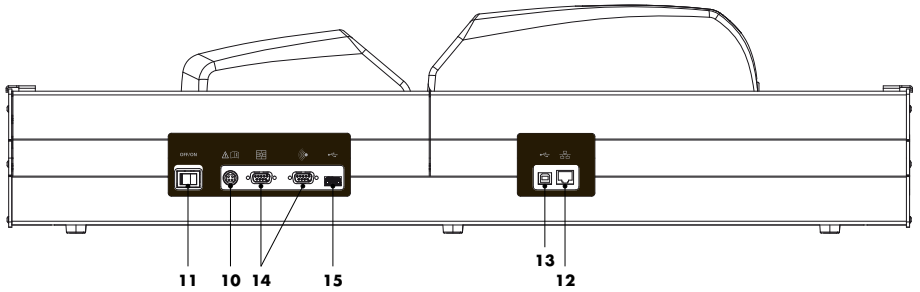
- Power supply unit - VP ELECTRONIQUE Type PAC150M or PROTEK POWER Type PUP150N-14
- Mains power cable.
- USB interface cable.
- Installation and documentation CD-ROM.
- Starter cleaning kit.
- Quick installation guide.
- Warranty notice.
- Compliance statement documentation.

If any of these components is missing, please contact your Evolis dealer.
Use only the power supply unit supplied with your Evolis printer.
VP ELECTRONIQUE Type PAC150M or PROTEK POWER Type PUP150N-14
Use only the USB cable supplied with your Evolis printer.

The Evolis printer must be placed in a dry location, protected from dust and draughts but well-ventilated. Take care to keep your printer on a flat, sturdy surface able to bear its weight.

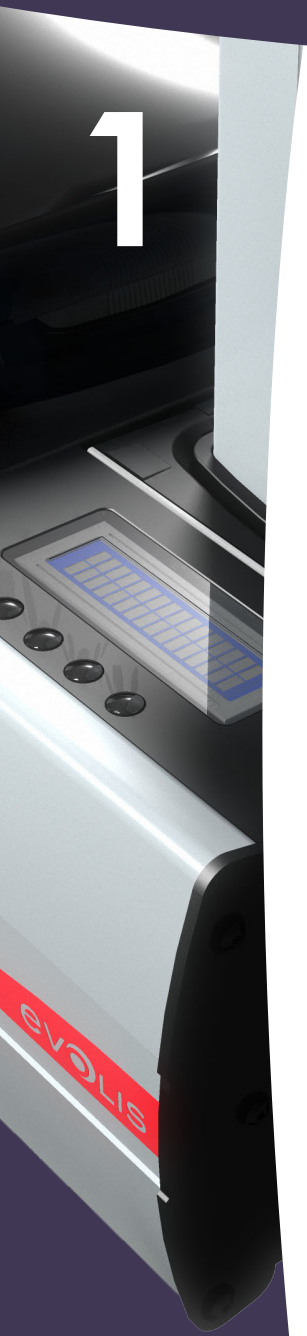
1-2 Description of the printer and its functions

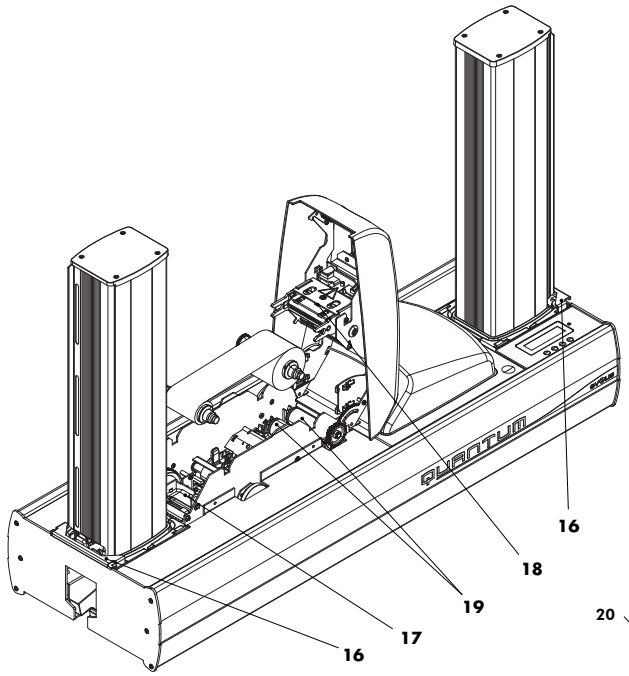


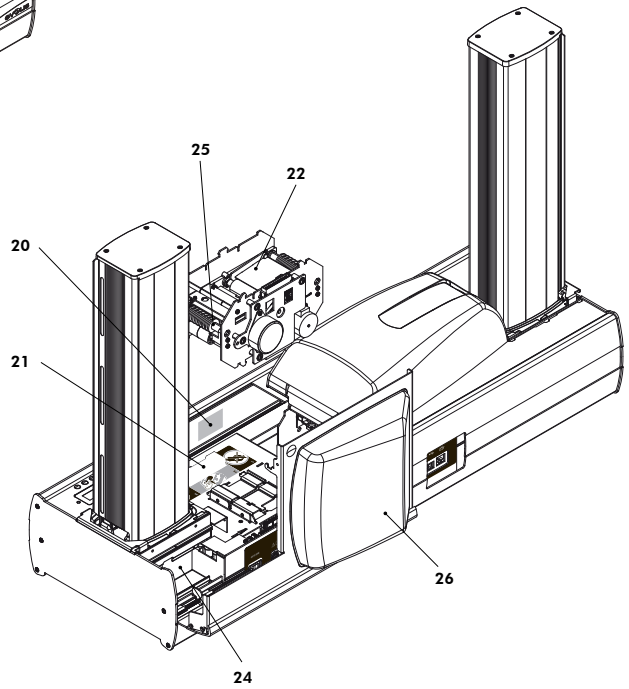


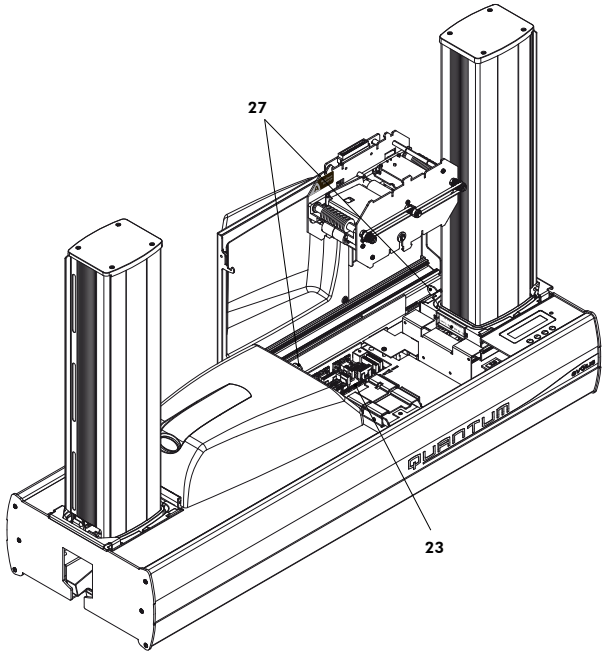
1 - Card input feeder
2 - Encoding module
3 - Printing module
4 -Output stack
5 - Reject hopper (20 x 0.76 mm or 30 mil cards)
6 - Centralised locking (option)
7 - Cover opening button (printing module)
8 - Cover opening button (encoding module)

9 - LCD control panel
10 - Power cable socket
11 - On-off switch
12 - Ethernet socket
13 - Computer USB socket
14 - DB9 connectors
15 - Peripheral USB socket









16 - Card input feeder and output stack release buttons
17 - Card turnover area
18 - Thermal print head
19 - Cleaning rollers
20 - Serial number label
21 - Reversible module release button
22 - Reversible encoding module
23 - Encoder connection zone
24 - Encoder fixing support
25 - Antenna fixing support
26 - Removable cover
27 - Cover release button

1-3 Installation

1-3a CONNECTING THE PRINTER

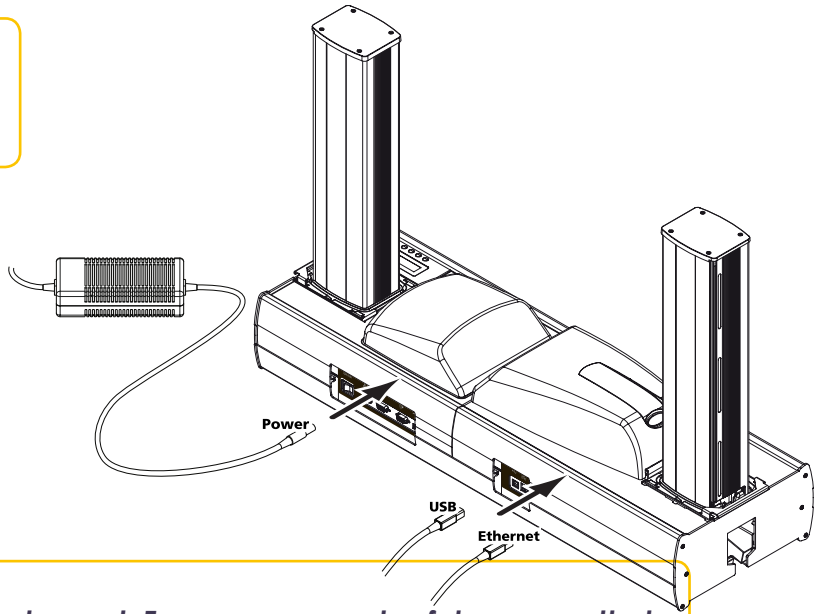
➤ Connection to the power supply

The printer must be connected to a properly protected and earthed electrical installation.

FI: Laite on liitettävä suojamaadoitus koskettimilla varustettuun pistorasiaan.
NO: Apparatet må tilkoples jordet stikkontakt.
SE: Apparaten skall anslutas till jordat uttag.

This is a Class A device. Operation of this equipment in a residential area may cause interference to radio communications. Should this occur, the user may be asked to take appropriate measures.

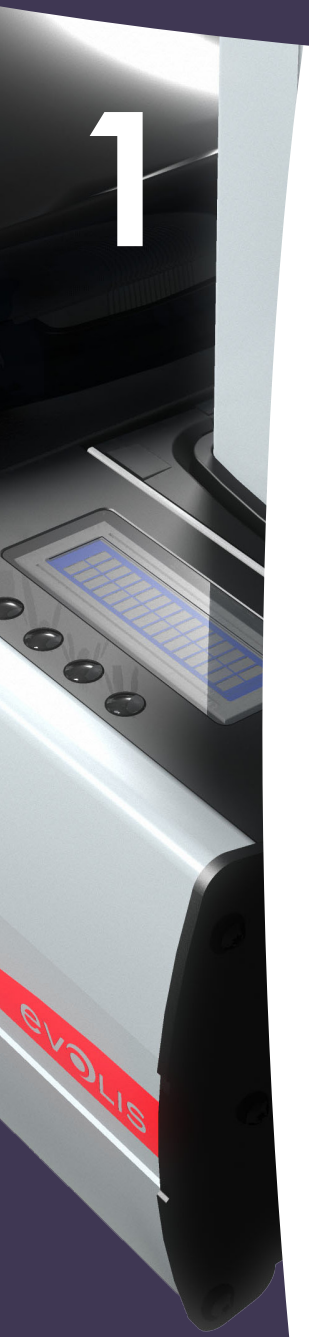
1. Connect the power cable to the power supply unit, then plug the power cable connector into the printer.
2. Next, plug the end of the power cable into an earthed power socket.
3. Power up the printer by switching the switch to **ON**.
4. The display on the control panel lights up and the message – **INITIALISATION** – is displayed. Once the start-up sequence has finished, the screen displays – **READY** – and the LED is a steady green light. Should this not be the case, the installation has not been carried out correctly. Check the installation.



Before attempting any maintenance, always ensure that the power switch is in the OFF position and that the power cable is unplugged. For your personal safety, ensure that both remain easy to access, especially in the event of an emergency.

NOTE

To save energy, the printer will automatically switch itself to standby mode after 10 minutes of inactivity.



➤ Connecting the USB cable

Under no circumstances should you connect the USB data cable before installation of the printer driver is complete.

Refer to the section on printer driver installation for further details, and follow the instructions carefully.

1-3b RIBBONS

Evolis original ribbons optimise your printer's operation and avoid causing damage to it. The use of ribbons from other suppliers is liable to damage your printer and voids the manufacturer's warranty for the printer.

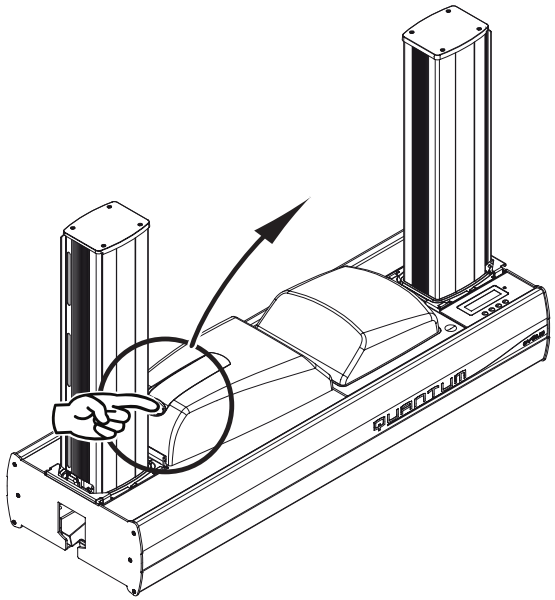
For optimum print quality, Evolis recommends that the printer is fully cleaned every time the ribbon is changed. See the Servicing and Maintenance section of this manual.

➤ Fitting the ribbon

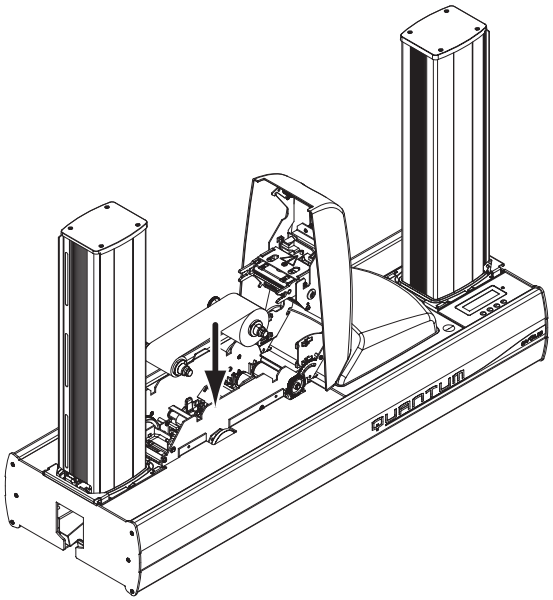
NOTE

Ensure that the appropriate ribbon type is selected in the print driver.

1. Open the printing module cover.
2. Insert the ribbon as shown.
3. Close the cover and press until a click is heard.



1



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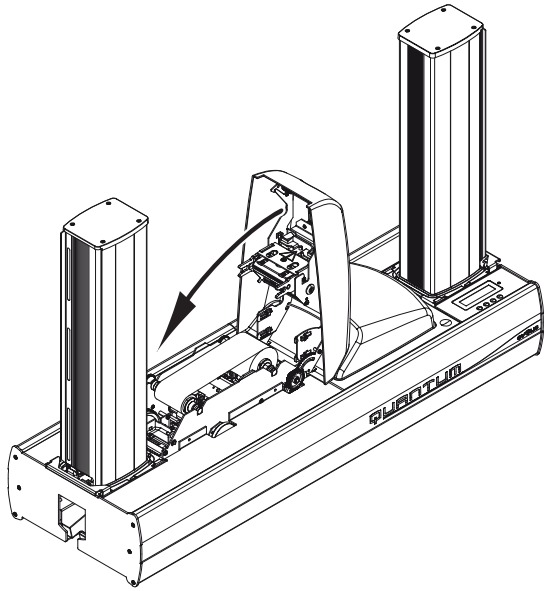


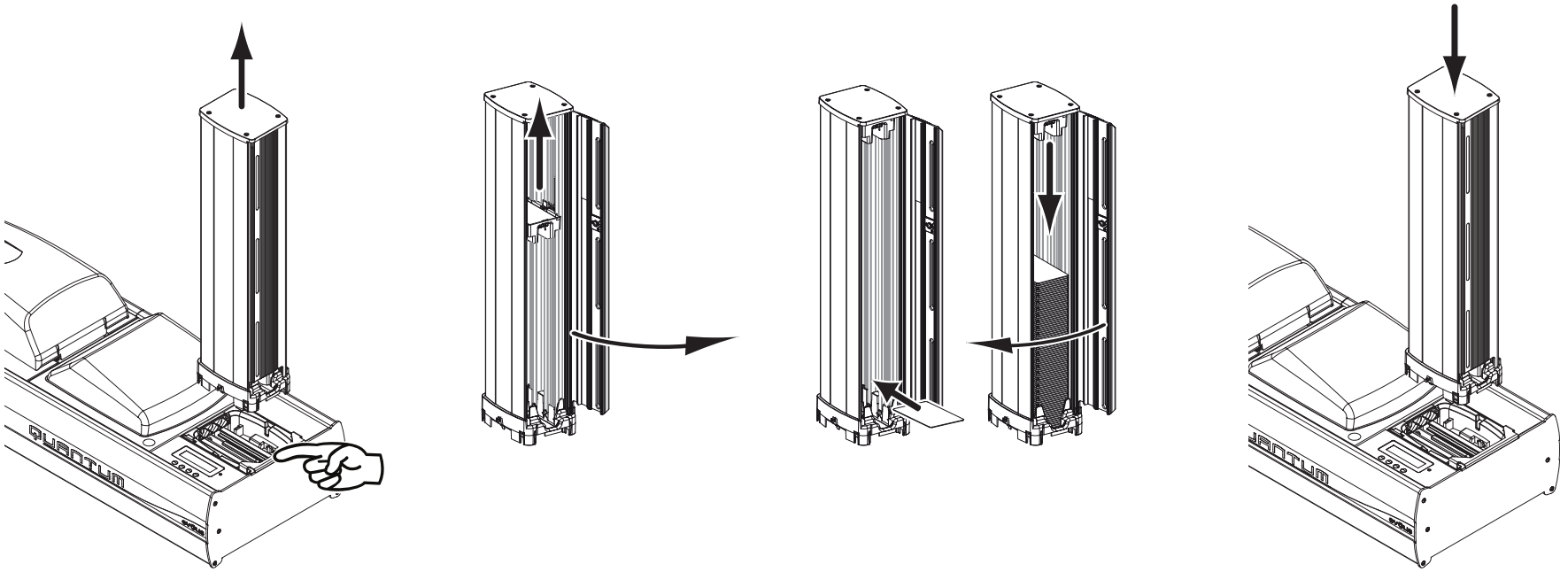
3

1-3c CARDS

For optimum quality, the cards used must be ISO 7810 certified.
Use only the card types recommended by Evolis.
Do not touch the printable surface of the cards in order to preserve print quality.
Do not use cards that have been damaged, folded, embossed or dropped on the floor.
Keep your cards protected from dust.

➤ Loading the cards

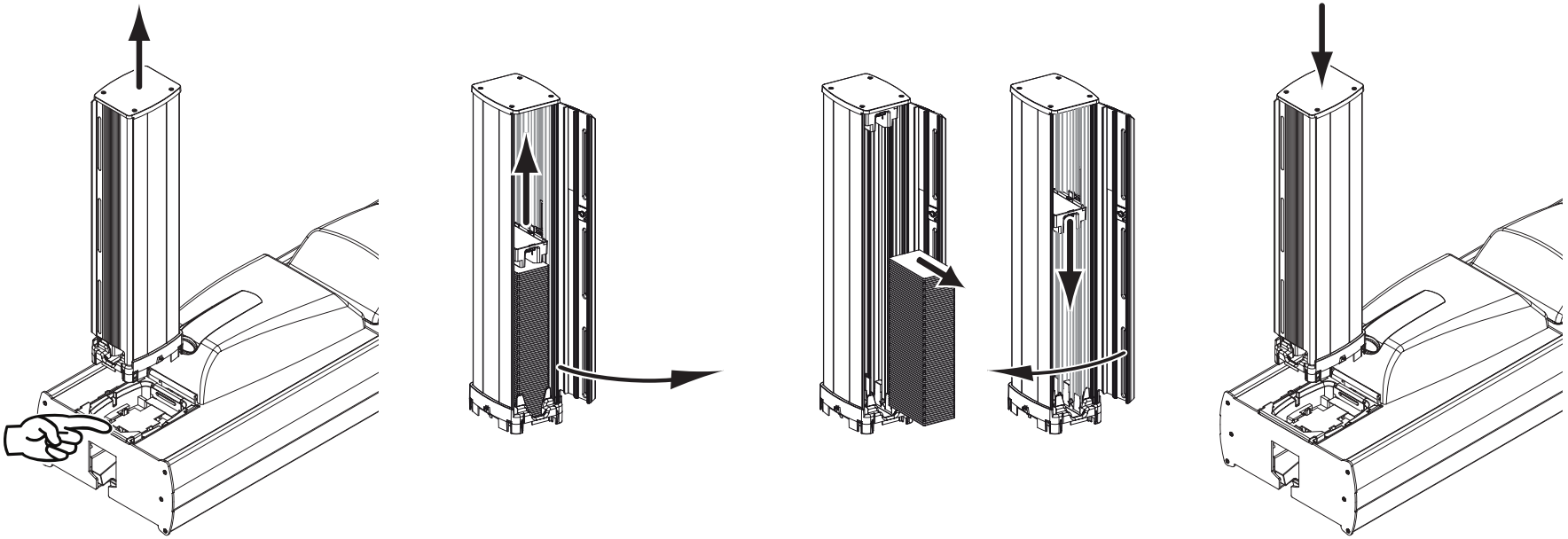
1. Remove the card feeder by pressing the release button.
2. Open the feeder door and lift the weight to feeder height. This will be held by a magnet.
3. Insert the cards, then lower the weight and close the feeder door again.
4. Replace the feeder in the printer (door facing the outside), the click confirms correct insertion.



➤ Removing printed cards

Once the print cycle is complete and/or encoding done, cards are delivered into the output stack found on the left of the device. This has a capacity of 500 cards in 0.76 mm (30 mil).

1. Remove the card output stack by pressing the release button.
2. Open the output stack door and lift the weight to output stack height. This will be held by a magnet.
3. Remove the cards, then lower the weight and close the output stack door again.
4. Replace the output stack in the printer (door facing the outside), the click confirms correct insertion.



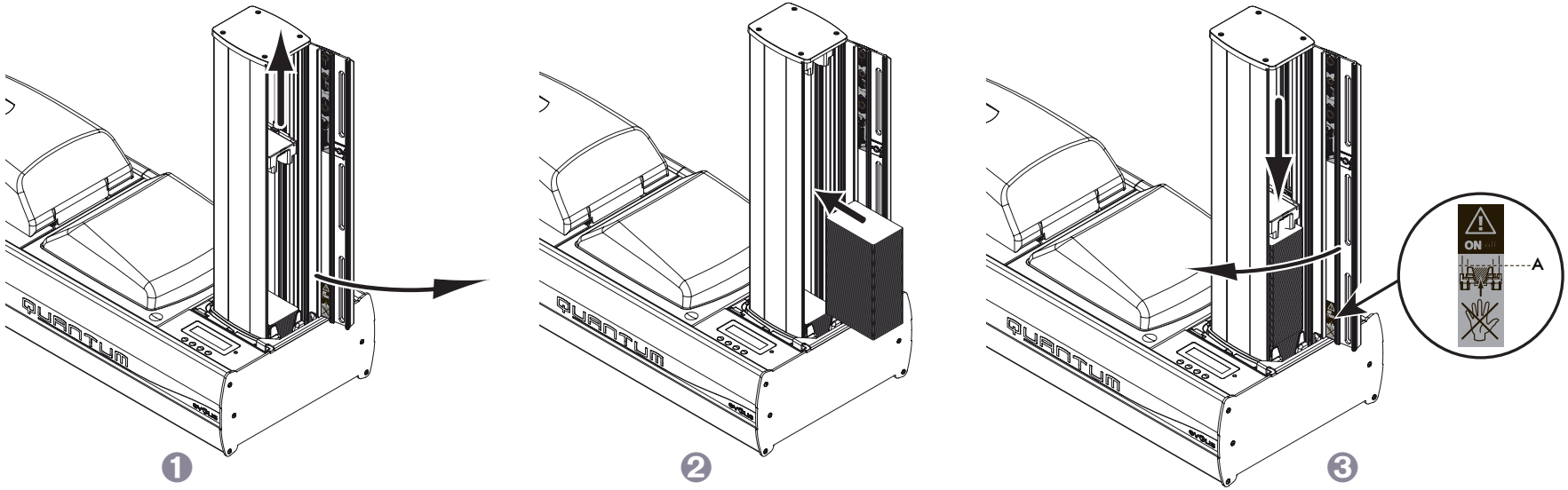
NOTE

It is possible to eject a printed card into the reject hopper rather than into the output stack.
To eject a card into the reject hopper, press the 2 outside buttons on the control panel simultaneously.
The following message appears: 'Next card ejected into reject hopper'. You then have one minute to start your printing.
If you press the 2 outside buttons on the control panel for longer (4s) and you then release it, you can set the 'Quantity of Cards' to be ejected into the reject hopper: up to 20 cards MAX.

➤ Loading and removing cards, with the printer in operation

It is possible to reload the cards into the feeder positioned on the standard printer (without central locking), when this is in operation.

1. Open the feeder door, lift the weight and fix it to the magnet.
2. Insert the cards into the feeder by packet.
3. Lower the weight onto the cards that have been inserted. Close the feeder door.



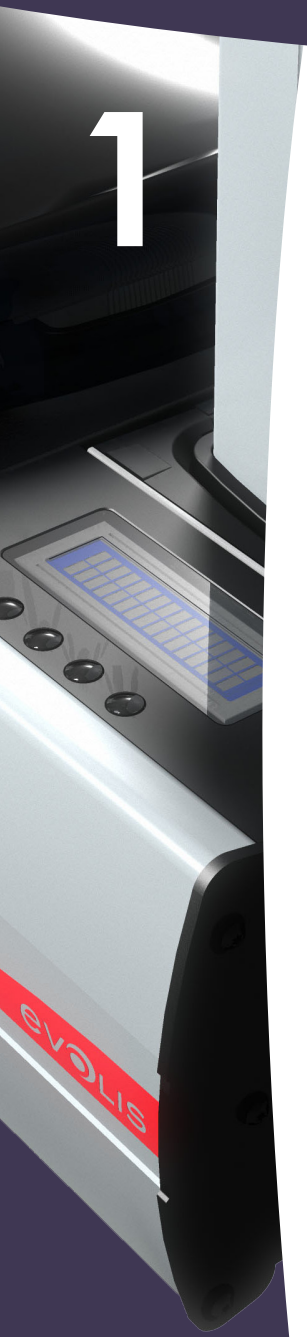
Similarly, it is possible to remove the personalised cards from the output stack in place in the printer when this is executing a job.

NOTE

Take care not to insert or remove cards under the level marked A.

➤ Adjusting card thickness

The printer accepts cards between 0.76 mm and 1 mm thick (30 to 40 mil). There is no adjustment to do.

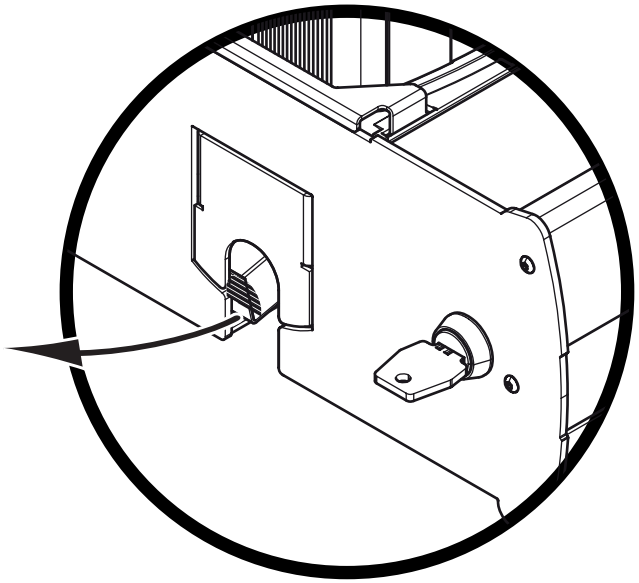


➤ Reject hopper management

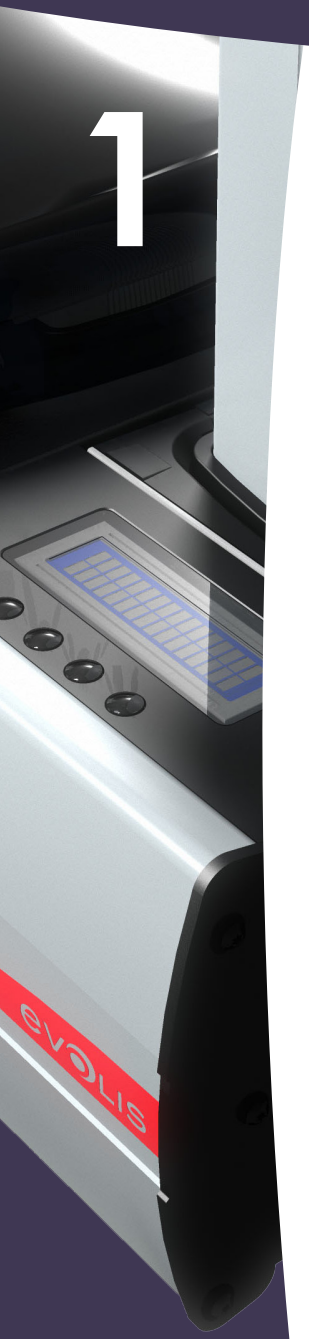
The printer is equipped with a reject hopper with a capacity of 20 cards.
When the reject hopper is full, the message – REJECT HOPPER FULL – is displayed on the control panel.

To empty the reject hopper on a printer with centralised locking:

1. Open the reject hopper by raising the door.
2. Remove the cards found, and close the reject hopper door again.

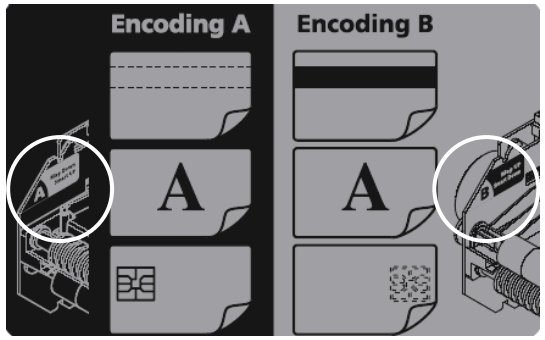


Evolis advises you to empty the reject hopper regularly, such as whenever the ribbon is changed or during routine maintenance.
For the standard version (without central locking), it is sufficient just to remove the cards present in the reject hopper.



1-4 Encoding module

1-4a GENERAL



The printer QUANTUM is equipped with a multi-function, detachable and reversible encoding module.

Entirely flexible, this module can be used to encode any type of card, e.g. magnetic stripe, contact and contactless smartcards.

Completely independent, it handles all the stages in an encoding run, at the same time as the printing jobs handled by the other module.

This encoding module is reversible, which means the user can turn the whole module round at once.

This unique feature means that cards can be encoded and printed in a single pass, without turning them over. The total card customization time is therefore considerably reduced.

The location of the encoding module is shown by the label stuck on it.

Position A = factory configuration = smartcard contact in upper position and magnetic stripe encoder in lower position.

Position B = magnetic stripe encoder in upper position and smartcard contact station in lower position.

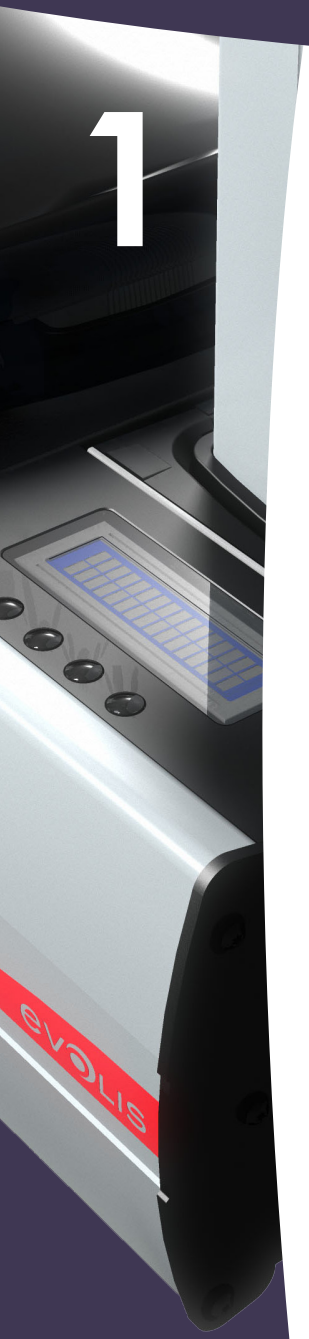
Lastly, the encoding module has a dedicated motherboard fitted with a number of connectors enabling contact and contactless smartcard encoders to be mounted.

An attachment support found on the back of the QUANTUM can be used to fit such encoders inside the device.

Before attempting any work on the encoding module, it is essential to turn the machine off and unplug the power cable.

NOTE

For further details about the encoding module and its features, please refer to the KU15 manual available from your Evolis dealer.



1

1-4b FUNCTIONAL CHARACTERISTICS & AVAILABLE OPTIONS

The encoding unit comprises:

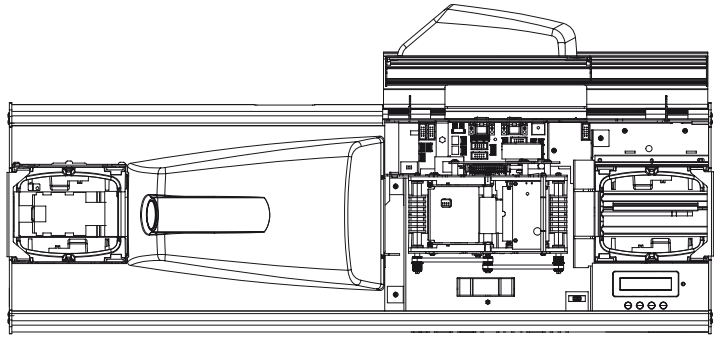
- a fixed electronic component, fitted under the mechanical component
- a motorized assembly including connection sockets, a magnetic stripe read-write head, a smartcard contact station along with a location for detachable antennas or encoders, with or without integrated antenna.

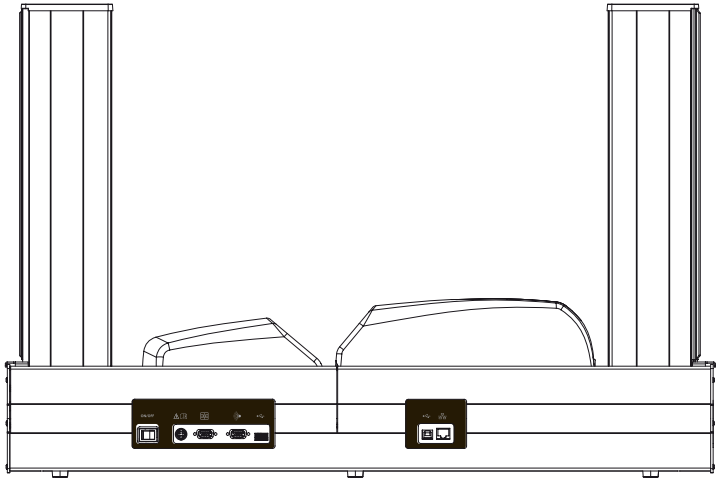
In its basic configuration, the module comprises:

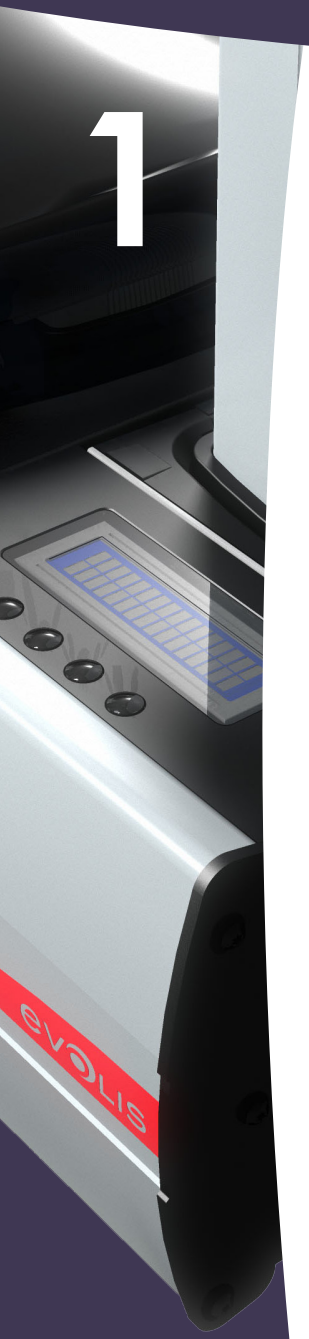
- An encoding unit turning mechanism
- An ISO 7811 magnetic encoding unit, 3 tracks, HICO / LOCO
- An ISO 7816-2 smartcard contact station
- An antenna support attachment
- 2 x internal USB ports for connecting a contact smartcard encoder and a contactless smartcard encoder
- 2 x RS232 serial ports (including one also supporting TTL) for connecting a contact smartcard encoder and a contactless smartcard encoder
- Internal power supply sockets enabling the encoders to be supplied with power directly
- 2 x DB9 female connectors mounted on the external connection panel for direct connection of encoders or smartcard station to the computer
- One linking connector between the motherboard and the reversible encoding unit

On request this module may be fitted with:

- JIS2 (Japan) magnetic encoding unit in place of the ISO encoder
- Contact and/or contactless smartcard encoder (list of available encoders on request)







Options installed on site:

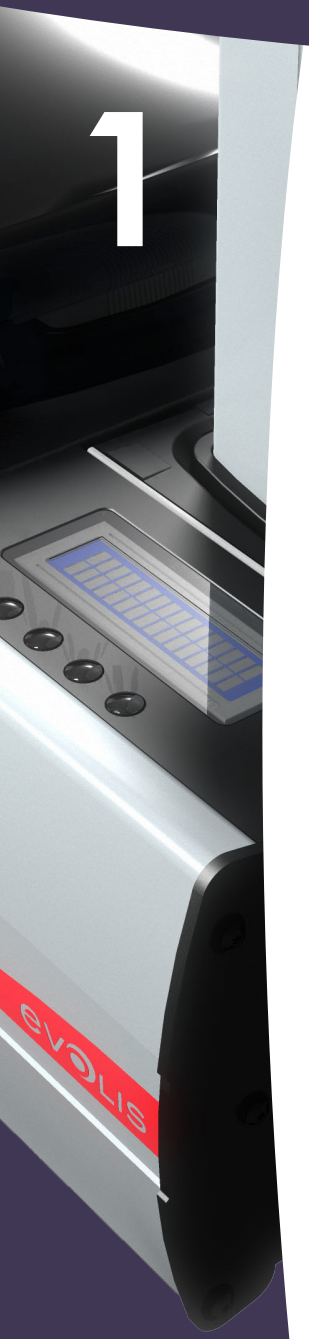
To offer maximum flexibility, the encoding module, while having an extensive range of factory settings, can be reconfigured in a few minutes by the user.
By means of extension kits or simply an appropriate connection, it is now very straightforward to carry out your own integration.
While observing safety rules and making sure of the quality of assembly and electrical connections, any user can consequently adapt their QUANTUM to customization work on a case-by-case basis and so, for example, convert a Mifare encoder into a device used to handle HID Prox cards.

Such adjustments can only be carried out by well-informed users. Ensure that instructions and advice relating to the assembly and disassembly of an encoder are strictly observed to adhere to user safety guidelines, and protect the integrity of the Quantum printer.

1-4c TURNING THE ENCODING MODULE

Turning the encoding module should only be done after turning the machine off and unplugging the mains power cable.

1. Open the encoding module cover.
2. With one hand, press the button to release the encoding module and with the other, lift it up vertically.
3. Turn the encoding module around (180°).
4. Put it back in the machine.
5. The module should click into place.
6. Close the cover again.
7. Turn the printer on again using the ON/OFF button.



1-4d REPLACING THE ENCODING MODULE

Despite the attention paid to the manufacture and quality of our products, the need to replace the encoding module may arise over the lifetime of the machine.
The module can be replaced by the user with no tools needed, simply by following the instructions very carefully.
Before doing anything else, please contact your Evolis dealer in order to check the advisability of replacing the encoding module. The dealer will supply a new encoding module if need be.
Under these circumstances, the following procedure will need to be scrupulously carried out, in order to keep very high quality encoding, copying the properties and settings for the replacement module into the printer.

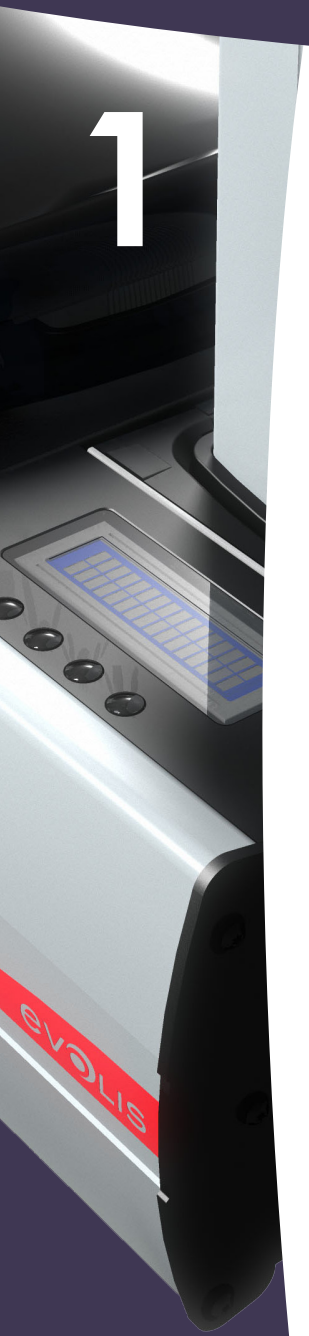
To exchange the encoding module, please proceed as follows:

Replacing the encoding module should only be done after turning the machine off and unplugging the mains power cable.

1. Open the encoding module cover.
2. Remove the encoding module found inside the machine.
3. Take the new encoding module, and note the code shown on the label stuck on it (bottom right of the front side when the module is in position A). You will be asked for this code subsequently.
4. Fit the new encoding module in its housing, in position A.
5. Close the cover.
6. Power up the printer and check that it is properly connected to a computer on which the printer's print driver is installed.
7. Under the print driver's Properties, click on the "**Tools**" tab.
8. In the "**Printer dialogue**" section, enter the following command: **Pmn;x**

where x = the encoding module kit code number that you noted in Step 3.
For example, if the encoding module kit number is: 89012700009321234567, the command to be entered is: Pmn;89012700009321234567

If the encoding module kit number is not entered correctly, machine malfunctions may occur and the warranty may be voided.



1-4e MAGNETIC STRIPE ENCODING

The Evolis magnetic encoder encodes the stripes in a single pass then runs a data check.
Configurable as high coercivity (HICO) or low coercivity (LOCO) by a simple click in the Windows print driver, Evolis magnetic encoders are however shipped with a default setting of high coercivity (HICO).

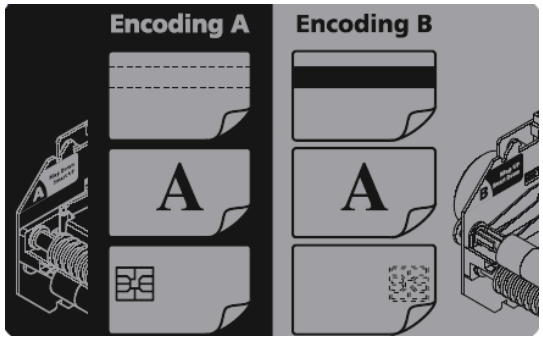
Use only magnetic stripe cards that comply with ISO 7810 and ISO 7811 standards.
The magnetic stripe must be moulded into the card to work properly.
Never use cards with a glued-on magnetic strip.

➤ Card positioning

Magnetic stripe cards must be placed in the card feeder to match the configuration selected for the encoding module, in position A or in position B.

Position A = magnetic stripe encoder in the lower position = cards loaded with the magnetic stripe downwards

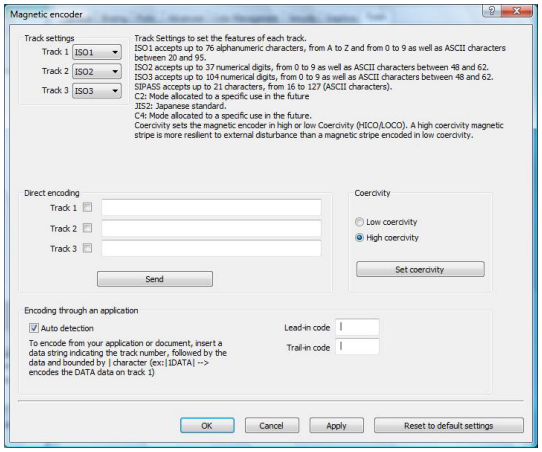
Position B = magnetic stripe encoder in the upper position = cards loaded with the magnetic stripe uppermost
Refer to section 1-3c for loading the cards



➤ Configuring the Windows print driver

When first installing the Windows print driver, the magnetic encoder functions need to be configured. The magnetic encoder functions are found in the print driver's **Tools** dialogue box by clicking on the **Encoding Settings** button.

➤ “Magnetic Encoder” dialogue box


Magnetic encoder
Track settings
Track 1 ISO1
Track 2 ISO2
Track 3 ISO3
Track Settings to set the features of each track.
ISO1 accepts up to 76 alphanumeric characters, from A to Z and from 0 to 9 as well as ASCII characters between 20 and 95.
ISO2 accepts up to 37 numerical digits, from 0 to 9 as well as ASCII characters between 48 and 62.
ISO3 accepts up to 104 numerical digits, from 0 to 9 as well as ASCII characters between 48 and 62.
SIPASS accepts up to 21 characters, from 16 to 127 (ASCII characters).
C2: Mode allocated to a specific use in the future
JIS2: Japanese standard.
C4: Mode allocated to a specific use in the future.
Coercivity sets the magnetic encoder in high or low Coercivity (HICO/LOCO). A high coercivity magnetic stripe is more resilient to external disturbance than a magnetic stripe encoded in low coercivity.
Direct encoding
Track 1
Track 2
Track 3
Send
Coercivity
Low coercivity
High coercivity
Set coercivity
Encoding through an application
Auto detection
To encode from your application or document, insert a data string indicating the track number, followed by the data and bounded by | character (ex:|1DATA| --> encodes the DATA data on track 1)
Lead-in code
Trail-in code
OK
Cancel
Apply
Reset to default settings

The Magnetic Encoder dialogue box opens when the **Encoding Settings** button is selected.

Track format is used to select the desired ISO standard for each magnetic strip. See the table in this Appendix for information regarding ISO 7811 standards.

Coercivity sets the magnetic encoding to high (HICO) or low (LOCO) coercivity. A magnetic stripe that is encoded in high coercivity is more resistant to external disturbance than a magnetic stripe encoded using low coercivity.

Direct encoding is used to directly encode one or more magnetic stripes from this window simply by selecting them and entering the data to be encoded. Click on the “Execute encoding” button to run the encoding cycle.

Automatic detection permits encoding of magnetic stripe cards from applications under Windows (such as Word for example). A text field enclosed within “| “ and “| “ characters (or other character which the user can define) will be interpreted as an encoding command by the print driver.

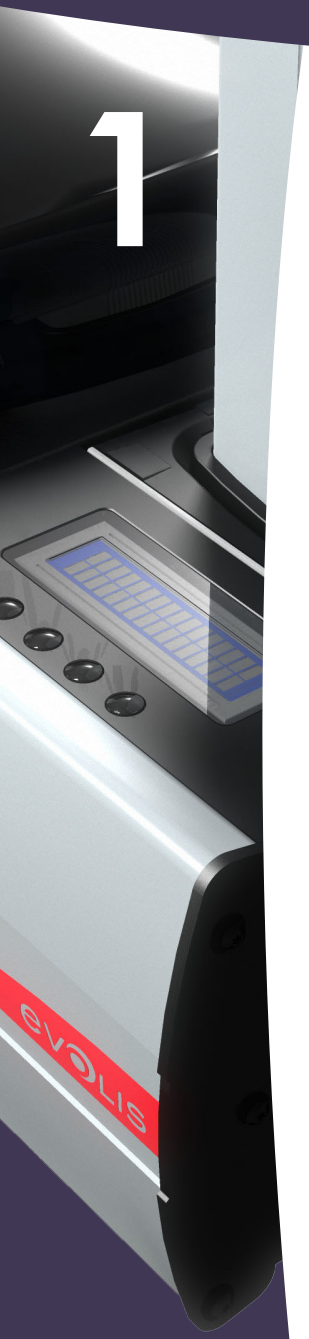
➤ Cleaning the magnetic encoder

The magnetic encoder head requires regular maintenance in order to ensure the integrity of the data encoded onto cards.

Cleaning of the magnetic encoder is carried out when the printer runs a cleaning sequence with pre-impregnated cards (see the “Maintenance” section of this manual for further information).

Repeatedly running the cleaning card through the printer cleans the card feed rollers, the cleaning roller, the print head and the magnetic encoder read-write head.

If, in between two printer cleaning runs, the read-write process fails with more than one card, it is recommended to run a printer cleaning sequence manually (please see the “Maintenance” section of this manual for the procedure to follow).



➤ ISO 7811 magnetic encoding standards

Track number	Separator	Density	Character set	Number of characters
Track 1	^	210 bpi[1]	Alphanumeric (ASCII 20-95)[2]	79[3]
Track 2	=	75 bpi[1]	Numeric (ASCII 48-62)[2]	40[3]
Track 3	=	210 bpi[1]	Numeric (ASCII 78-62)[2]	107[3]

[1] Bit(s) per inch
[2] Except the character "?"
[3] Including the Start, Stop and LRC characters. These characters are automatically handled by the magnetic encoder

1-4f CONTACT SMARTCARD ENCODING

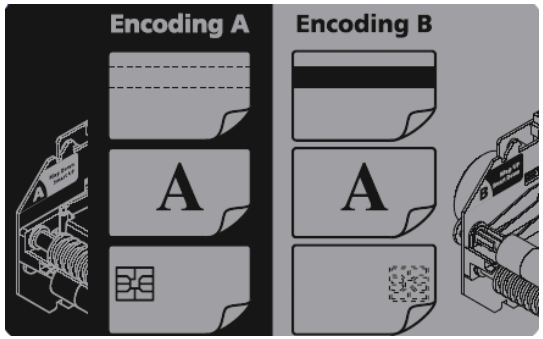
The smartcard contact station supplied on your Evolis machine permits connection between chips to the ISO 7816-2 card standards and your encoder.
To make contact with the station, the smartcard is positioned on it and is mechanically pushed into it. The chip programming sequence is always done before printing the card.

Use only smartcards compliant with the ISO 7816-2 standard.
Never print over the chip.

The Evolis product catalogue also has printers equipped with a smart contact station and a built-in encoder.
Depending on the model, these encoders connect to the PC via an RS-232 interface (DB-9 socket) or a USB interface.

➤ Card positioning

Contact smartcards must be placed in the card feeder to match the configuration selected for the encoding module, in position A or in position B.
Position A = smartcard contact station in upper position = cards loaded with chip uppermost
Position B = smartcard contact station in lower position = cards loaded with chip downwards
Refer to section 1-3c for loading the cards.



➤ Command sequence for positioning the smartcard

A sequence of commands must be sent via the printer's interface to insert a card into the printer then position it under the station and establish contact.

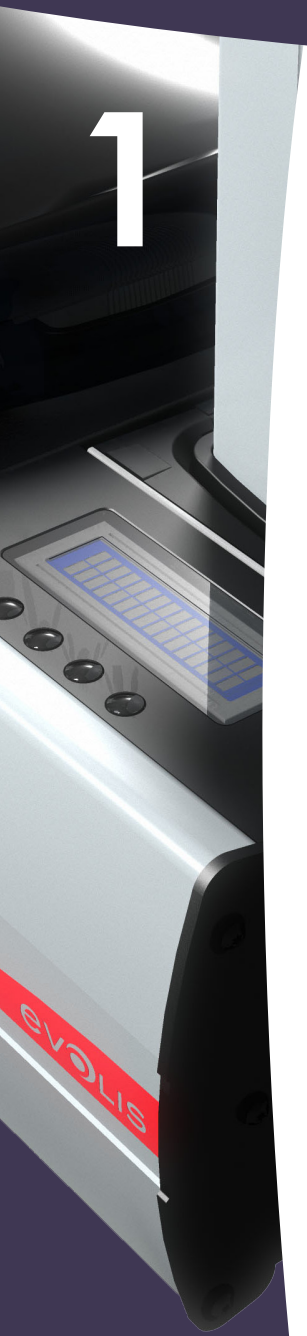
The command sequence is as follows:

Sending the SIS sequence:

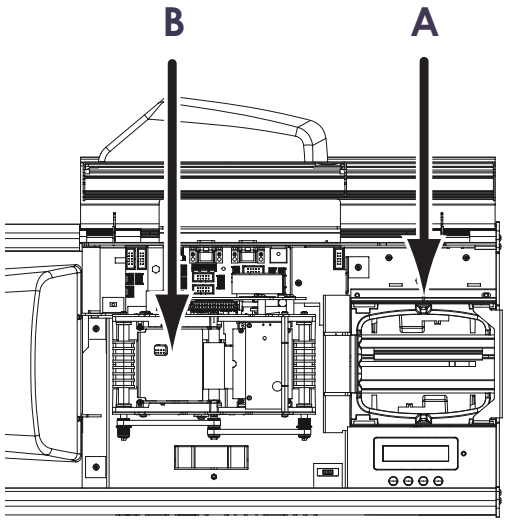
- A card is moved from the feeder towards the contact station and stops under it.
- The card is pushed upwards to make contact with the Station.
- The printer connects the contact station to the DB9 connector.
- The chip is programmed via the computer's serial interface and the external coupler.

NOTE

Refer to the Evolis printer Programming Guide for further details on programming smartcards.
Refer to the KU15 'Quantum Encoding Module' manual for further details on connecting the smartcard encoder.



1-4g CONTACTLESS SMARTCARD ENCODING



Evolis printers may be equipped with an encoding device for contactless smartcards (RFID).
This consists of an encoding module and sometimes a detachable antenna.

Quantum is fitted as standard with an encoder support (**A**), and an antenna support (**B**), cf. diagrams opposite.

Integrating such a module must be carried out by a specialist.

The Evolis product catalogue also has printers equipped with a built-in encoder for contactless chips.

Depending on the model, these encoders connect to the PC via an RS-232 interface (DB-9 socket) or a USB interface.

There is a very wide variety of contactless cards, and each card has specific technical properties associated with an equally specific type of encoder. See your Evolis dealer for further information.

➤ Location of antenna (or of encoder with integrated antenna)

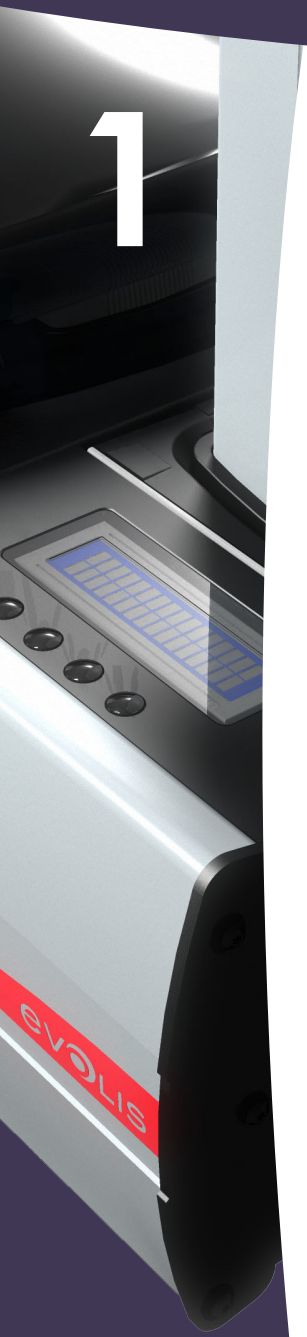
By means of a specific command, the card is positioned close to the antenna such that the card lies within its radio range.

Reading data from or writing data to the card can then start.

The programming sequence for a smartcard is always carried out before the printing.

➤ Card positioning

On the face of it, there are no restrictions on card positioning when programming in contactless mode.
However, the miniaturisation of components is bringing about the emergence of cards fitted with mini-antennas.
In this situation, please see your card supplier for further information about where this mini-antenna is located in the card, so as to present the card as close as possible to the encoder's antenna. Doing so will ensure optimum encoding of the cards.



➤ Command sequence for positioning the contactless smartcard

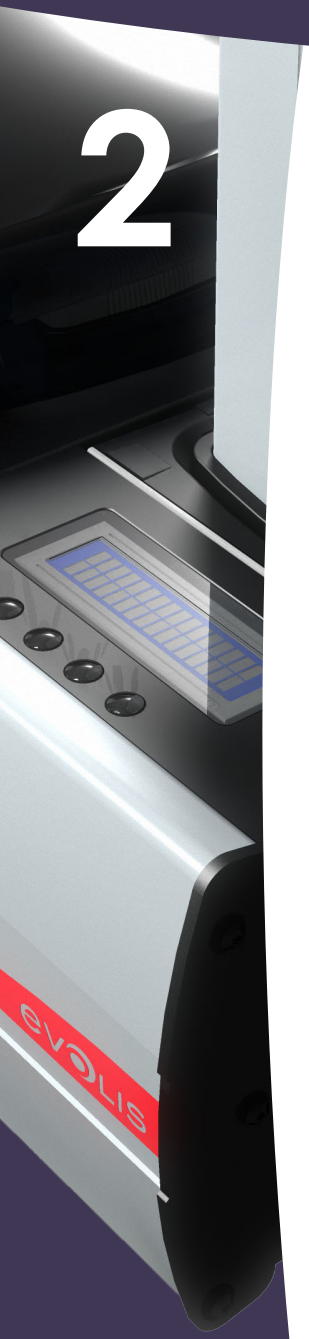
A sequence of commands must be sent via the printer's interface to insert a card in the printer then position it close to the antenna to establish radio communication between the card and the encoder.

The command sequence is as follows:

Sending the SIC sequence:

- A card is moved from the feeder towards the antenna and is positioned close to it.
- The chip is programmed via the computer's serial (or USB) interface connecting the built-in encoder to the computer.

Refer to the Evolis printer Programming Guide for further details on programming contactless smartcards.
Refer to the KU15 'Quantum Encoding Module' manual for further details on connecting the smartcard encoder.



2 Printing

The information about the procedures described in this section refers to a Windows 7 environment.

2-1 Installing the print driver

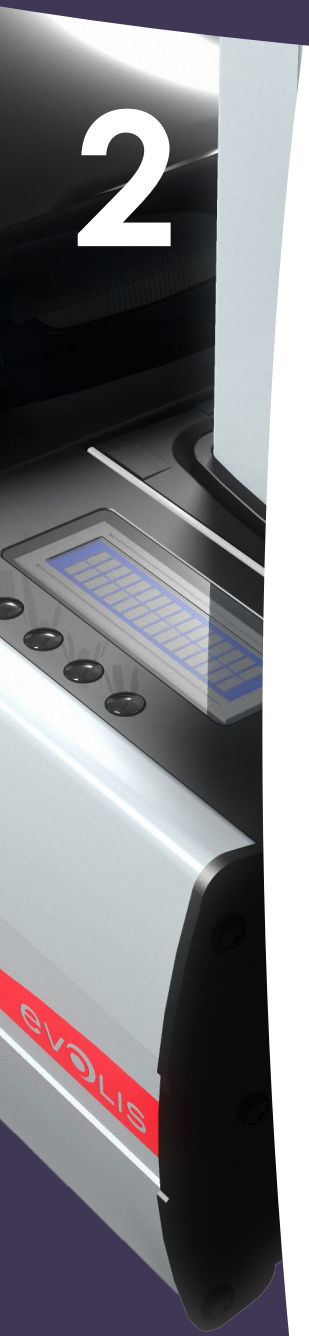
Configuring the printer and its driver is a very important step and requires very special care. In fact, inappropriate settings are a factor having a negative impact on the quality of card customization. It is therefore essential to proceed in stages, changing settings only when you are completely sure. Evolis offers the option to revert to the factory settings at any time if the adjustments made do not give the expected results.

Your printer is delivered with a CD containing the print drivers for Windows and Macintosh platforms.

To install a print driver, insert the CD into your computer and select the print driver menu. A program will guide you through the entire installation process.

Do not connect your USB cable to your computer until prompted to do so by the installation program.
For the connection procedure, see the section on Connecting the Printer.

Follow the installation procedure scrupulously. Some versions of Windows require the user to have administrator rights to install the driver.



2

2-2 Managing the print settings

Before using your printer, it is essential to check and/or change the default print driver settings:

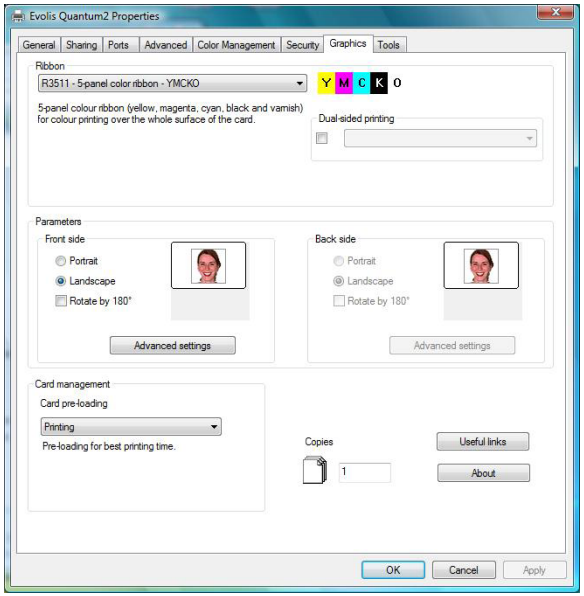
- Ribbon type
- Card type
- Finish, treatment
- …

You will find more detailed information about the cards recommended by Evolis in the 'Evolis High Trust®' list of consumables.

Pay attention to the settings defined under the print driver Properties and do not hesitate to contact your Evolis dealer for any advice and assistance needed before making any changes.

These print settings are accessible:

- From the **Start** (Windows logo) button found bottom-left on the Windows task bar, select **Peripherals and printers**.
- Select your printer and double click.
- From the **Printer** menu, select **Properties**.
- The first properties configuration screen for the equipment then appears.
- The main tabs used to define the settings are "**Graphics**" and "**Tools**".

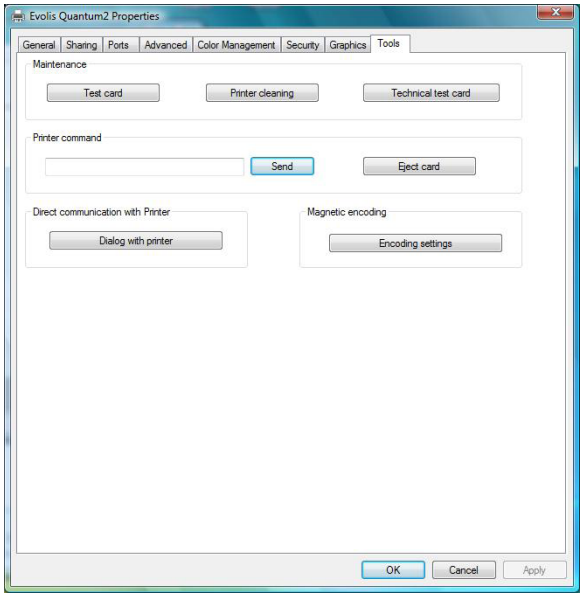


➤ 'Graphics' tab

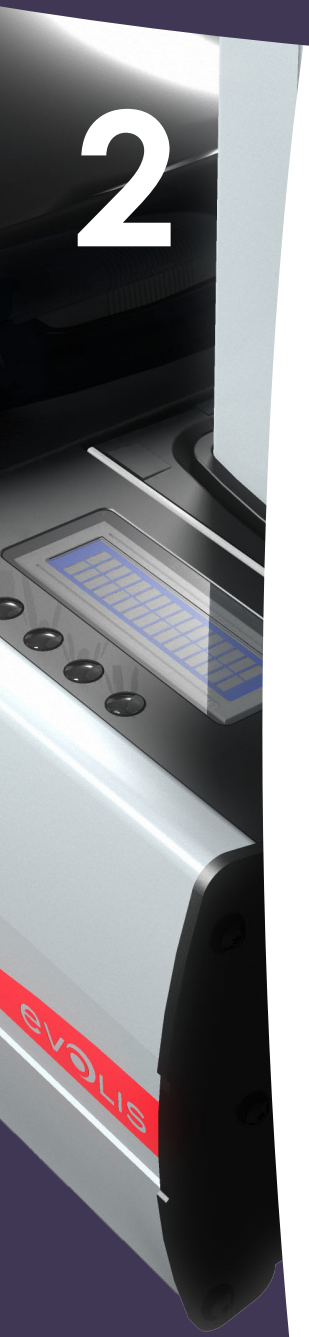
- Ribbon type
- Front/back printing
- The card loading method
- Card orientation, portrait or landscape
- Number of copies
- Advanced options

➤ 'Tools' tab

- Magnetic encoding option configuration and testing
- Printing a test card
- Cleaning the printer
- Printing a technical test card
- Dialogue interface with the printer



We recommend that you print a test card when first using the printer, and keep it. This card records information such as the model and serial number which you could be asked to provide if you call technical support.



2

2-3 Printing a card

A large number of Windows applications allow documents to be printed (for example the tools in Microsoft's Office suite: MS-Word, MS-Access, MS-Excel, MS-PowerPoint).

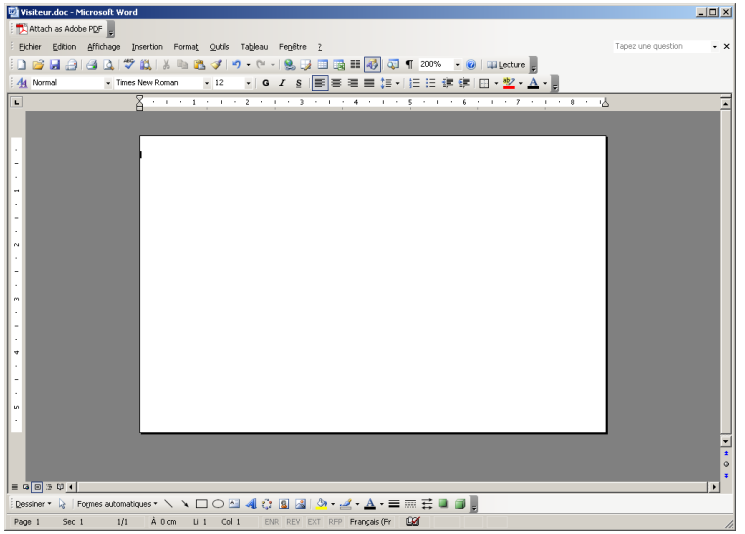
To gain familiarity with the layout of a card and configuring its formatting and printing, we suggest the following example.

➤ Using Microsoft® Word

After having set the Evolis printer as the default:

- Start the MS-Word application
- Click **File** in the menu bar, then **Page Setup**
- The Paper tab has a Paper **Format** option, select **'CR80 Card'** type
- For Word 2010: click the **Page Setup** tab, then **Paper size** and select '**CR80 card**' type
- In the **Margins**, tab set all the margins to '0', then in the **Orientation** menu, select **Landscape** mode.
- Close the window by clicking **OK**.

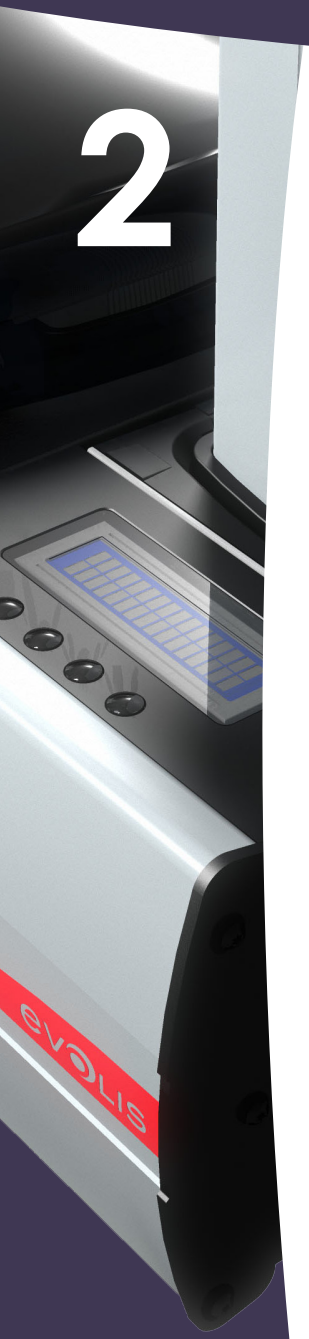
Your Word window should now look like this:



You are ready to customise your card by adding the various items that go to make up a card:

- Logo and Illustration
- Identification photo
- Fixed and variable text
- Bar code, etc.

Once ready, click **File** and then **Print**.



2

2-4 Connecting to a network (Ethernet)

All Evolis printers have the benefit of a TCP/IP network connection system. This feature is available as standard or as an option, depending on the model in the range.

Out of the box, the printer comes configured in DHCP mode (Dynamic Host Configuration Protocol), which means that its IP address is supplied by the network. In addition to these basic settings, the network administrator has the option of configuring the printer differently in order to comply with the constraints imposed by the corporate LAN:

- Printer connected in a subnet, using DHCP
- Printer connected within a subnet with fixed IP address, with WINS resolution
- Printer connected within a subnet with fixed IP address, without WINS resolution

The printer may be identified on the network in two ways:

- By its Hostname (NETBIOS)
- By its IP address

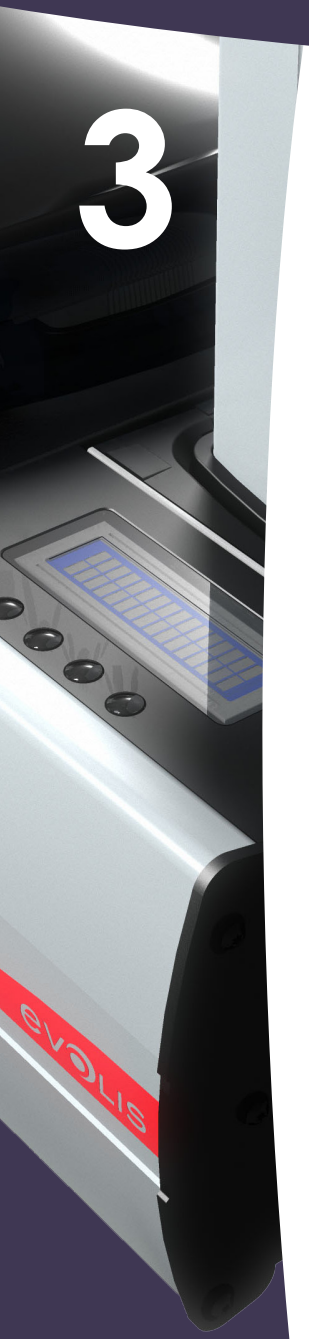
The user-definable settings are:

- The printer's IP address
- Subnet mask
- Gateway
- WINS server

* can be configured directly via the LCD.

Changing the printer's basic settings, without prior knowledge of the layout of the LAN in question or without genuine technical knowledge may result in a malfunction of the printer, and may even extend to a more widespread failure of all or part of the LAN. Contact your System and Network Administrator before connecting to or changing the settings for your local area network.

For further details, refer to the 'Configuration of Evolis printers on a TCP/IP (Ethernet) LAN' manual (Ref. KU14).



3 Maintenance

3-1 General warranty information

Your Evolis printer has been designed to give you long service and needs only minimal regular maintenance. Please comply with the instructions given below to ensure that it runs satisfactorily.

Keep your warranty cover!

The manufacturer's warranty is subject to strict adherence to the routine servicing and maintenance instructions, and in particular the printer cleaning cycles.

Any failure to follow the maintenance and servicing procedures described in this section voids the print head warranty.

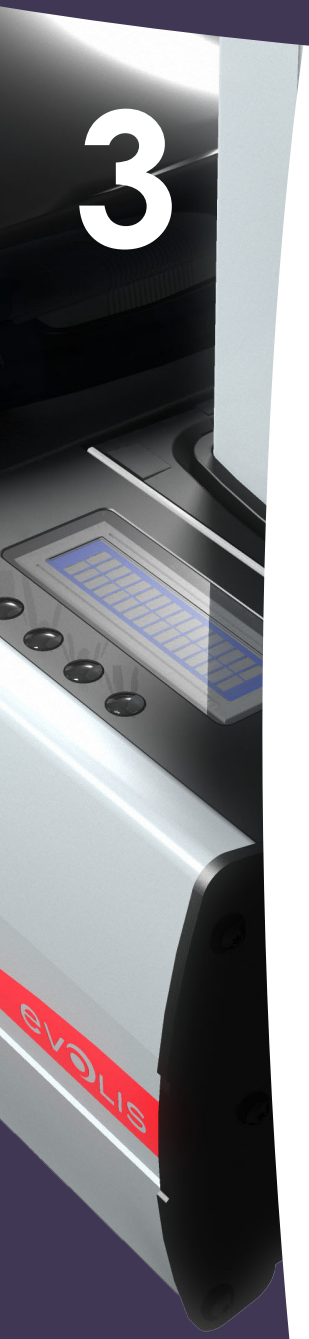
Evolis declines any liability where there has been a failure to carry out required maintenance on the printer.

The print head is a wearing part and an extremely sensitive printer component. Its useful life can be seriously curtailed by the presence of dust, liquids or solids in the printer's immediate environment, on the print head or on the cards. Users must take all necessary precautions to insert only clean cards, free of dust deposits or foreign bodies, into the machine.

The frequency and quality of cleaning are decisive factors enabling users to extend the print head's useful life and to ensure excellent print quality. Particular care must therefore be taken with cleaning. Users must comply with the servicing and maintenance instructions as fully described in this section.

In addition, the use of Evolis brand ribbons ('Evolis High Trust®') also ensures that your equipment operates properly. Use of ribbons not approved by Evolis may as a consequence affect the quality and reliability of print jobs, produce low quality printed output and even affect the printer's operation. The manufacturer's warranty does not cover physical damage or quality problems caused by using non-Evolis approved ribbons.

Evolis provides replacement parts and consumables that you can refer to within this user guide or by visiting the website at **www.evolis.com**.



3-2 Routine printer cleaning

The print head warranty is directly linked to routine cleaning of your printer.
If you do not carry out this cleaning at the required times, the print head warranty will cease to be valid.

Recommended cleaning cycle: whenever the ribbon is changed
Mandatory cleaning cycle: when the cleaning warning is triggered
Servicing accessory: cleaning card

Your printer is fitted with a cleaning warning system which is triggered after a certain number of cards have been inserted, depending on the model of printer that you have (see table below).
You should proceed with the routine cleaning of your printer as soon as the warning is triggered.
If you continue to run the printer despite the warning and if the warning light starts to flash, the print head warranty will be automatically voided owing to a failure to comply with your contractual maintenance obligations.

Printer	Cleaning required after: *(indicator lamp lit or LCD message – CLEANING REQUIRED –)*	Number of cards remaining before warranty voided *(indicator lamp lit or LCD message – CLEANING IMPERATIVE –)*	Warranty invalid after: *(indicator lamp flashing or LCD message – CLEANING IMPERATIVE –)*
Tattoo2	400 cards	100 cards	500 cards
Tattoo RW	400 cards	100 cards	500 cards
Pebble4	1,000 cards	200 cards	1,200 cards
Dualys3	1,000 cards	200 cards	1,200 cards
Securion	800 cards	200 cards	1,000 cards
Quantum	900 cards	700 cards	1,600 cards

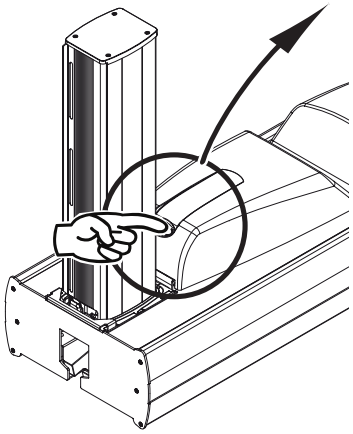
So, for example, for a Tattoo2 printer, if you insert 50 cards after the cleaning warning is triggered, you have only 50 more cards before cleaning the printer and keeping your warranty valid.

3

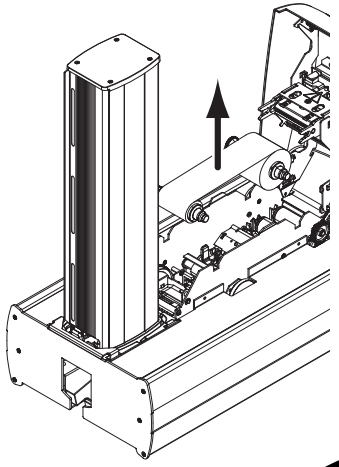
Follow the procedure below:

Repeatedly running the cleaning card through the printer cleans the feed rollers, the cleaning rollers and the print and magnetic head.

1. Open the printing module cover.
2. Remove the ribbon found inside if appropriate.
5. Close the cover.
4. Remove the feeder from the printer as shown.
5. Obtain a new cleaning card supplied by Evolis and open the menu on the LCD display by pressing the keys. Select the '**Cleaning** menu' and confirm with '**OK**'.



1



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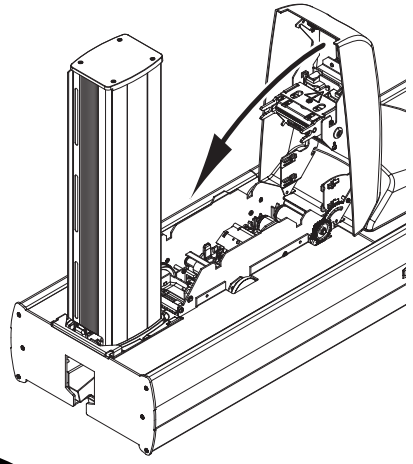

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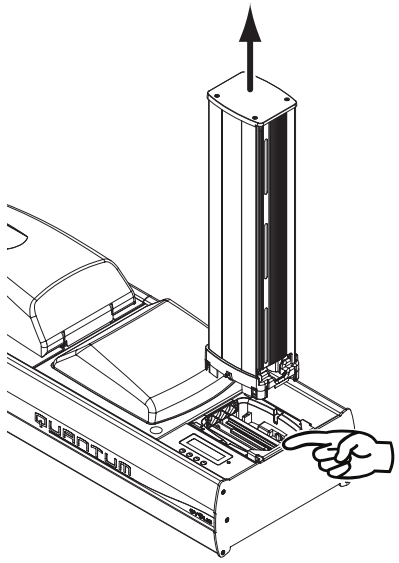

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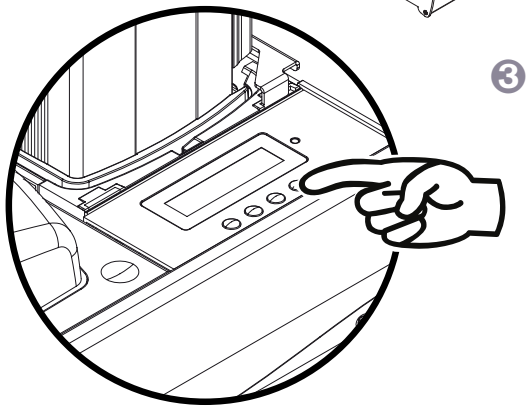


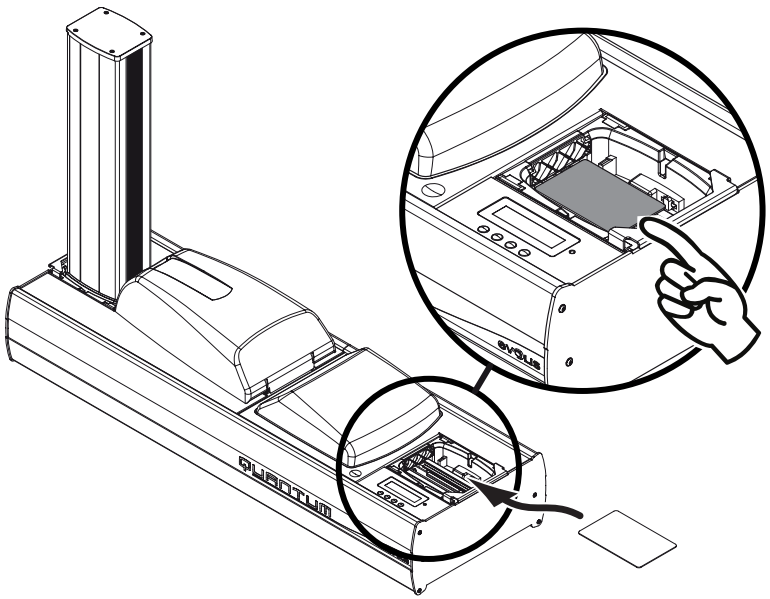
5

3

6 Insert the cleaning card manually and push it into the machine. This will load automatically. Cleaning starts, the display indicates '**Cleaning**'. The cleaning card will be automatically ejected into the reject hopper.

7 Replace the feeder in the printer.

8 Replace the ribbon and close the cover.



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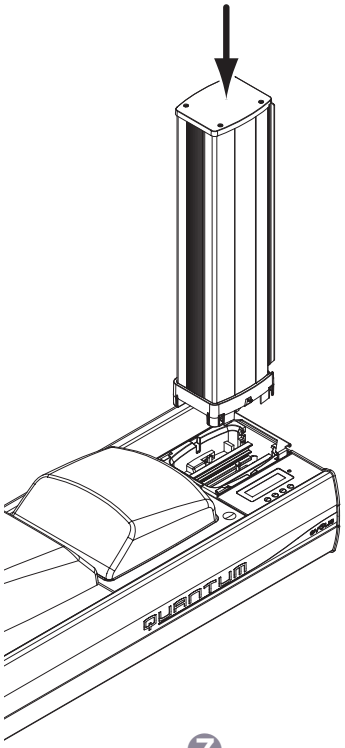

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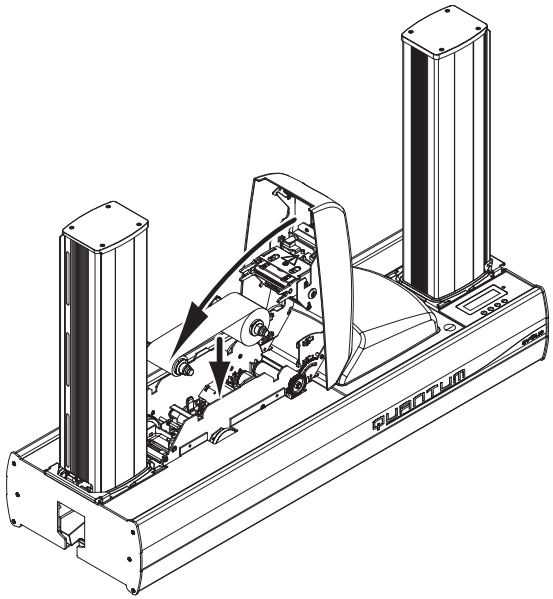


8

Wait for 2 minutes after cleaning before using your printer.

3-3 Servicing the cleaning rollers

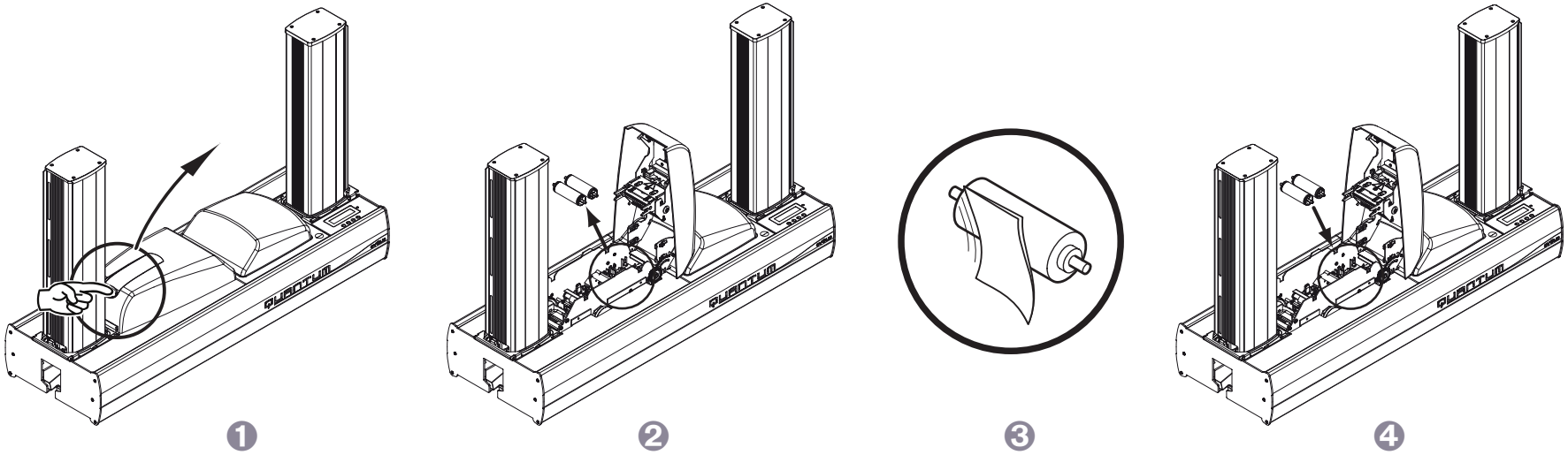
In addition to routine printer cleaning, we suggest that you clean the cleaning rollers using the special wipes available from Evolis. These rollers remove any dust or particles from the cards before printing.

NOTE

Recommended cleaning cycle: whenever the ribbon is changed
Servicing accessory: cleaning wipe

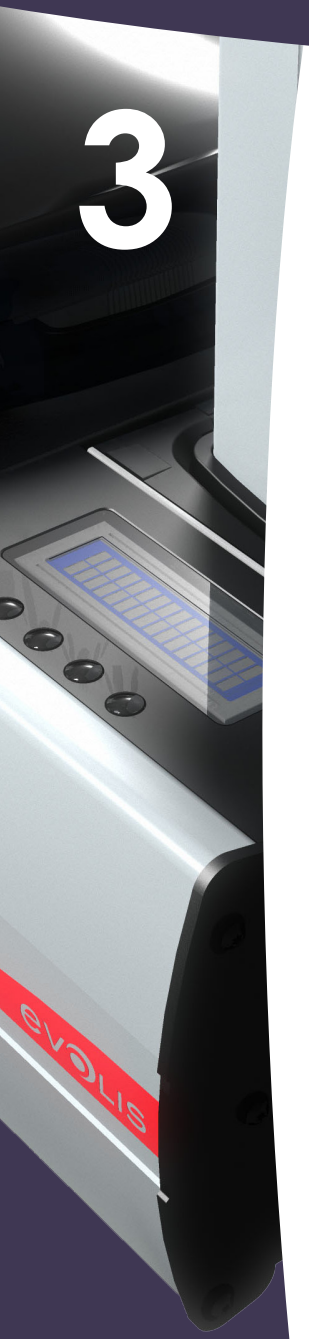
Follow the procedure below:

1. Open the cover and remove any ribbon.
2. Remove the cleaning rollers.
3. Rub the wipe gently over the surface of the roller.
4. When it has dried, put the cleaning roller back in the printer.



NOTE

Wait for 2 minutes after cleaning before using your printer.



3-4 Servicing the print head

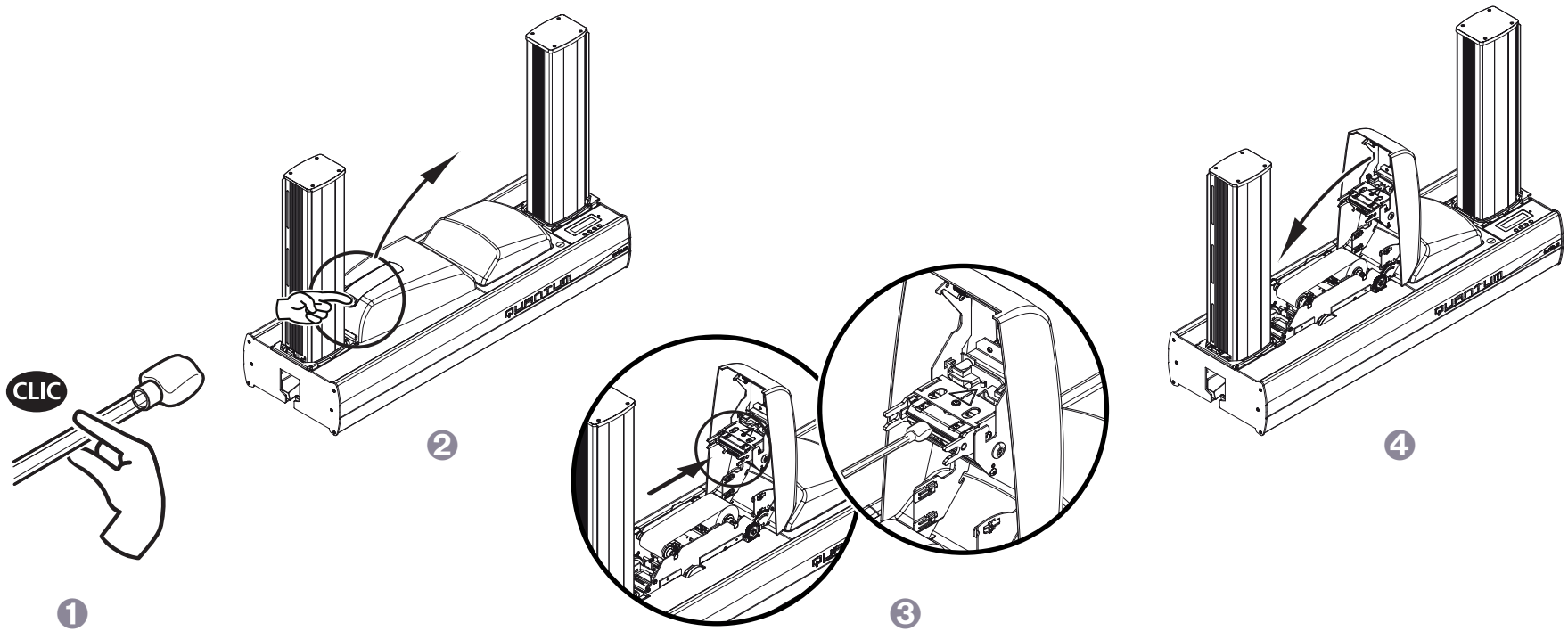
Recommended cleaning cycle: whenever the ribbon is changed
Servicing accessory: Special swab impregnated with isopropyl alcohol

The print head is cleaned in the course of the printer's routine servicing procedure (see previously).
However, to maintain the original print quality and to absorb surplus ink on the print head, we recommend that you regularly clean the print head (whenever the ribbon is changed) using the swabs supplied by Evolis.
You must also protect the print head and its components from any discharge of static electricity.

Unplug the printer from its power supply before cleaning the print head.
Follow the cleaning cycles scrupulously.
Avoid any contact between the print head and any metal or sharp objects.
Avoid touching the print head directly with your fingers, as this could affect print quality or permanently damage the print head.

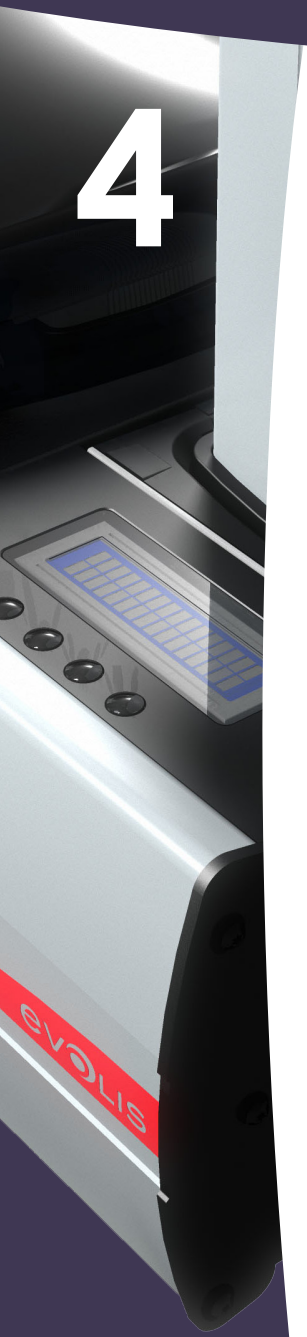
Follow the procedure below:

1. Take an Evolis High Trust® swab and press the middle of the tube until the end of the swab is impregnated with alcohol.
2. Open the cover and locate the print head.
3. Gently rub the swab from left to right along the print head for a few seconds.
4. Close the cover.



NOTE

Wait for 2 minutes after cleaning before using your printer.

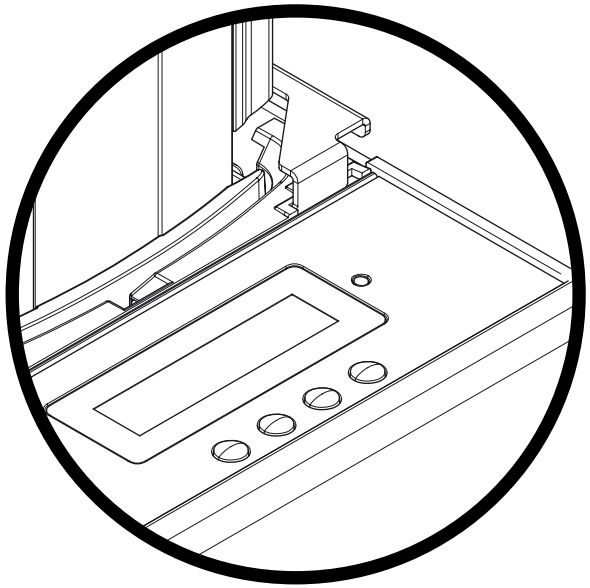


4 Help

This section gives a number of suggestions allowing problems that may arise when using your printer to be identified. If you do not manage to solve your problem, this section also explains how to contact Evolis technical support.

4-1 Introduction to the printer menu

The Quantum printer has an LCD display combined with a light-emitting diode (LED) enabling the operator to see the operating condition of the equipment and make adjustments to the most common settings.



The control panel comprises 3 units:

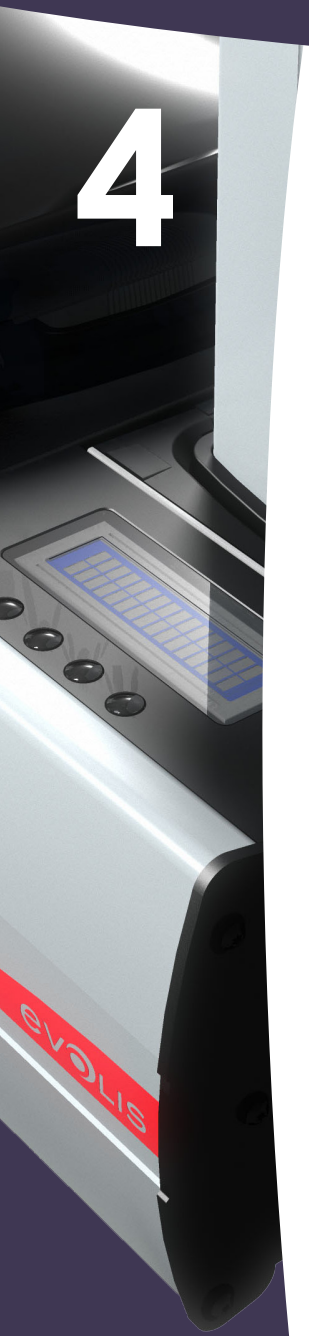
- One LCD unit with 2 lines, each of 16 characters, back-lit for better readability
- Four navigation buttons used to move around the menu, and confirm or cancel selections
- 1 two colour LED: green for normal operation, red in the event of a warning requiring the operator's attention

When idle, after a short phase when the printer is turned on, the control panel shows the following status:

Line 1 = printing module status = READY
Line 2 = encoding module status = READY A or READY B (the letter A or B corresponding to the encoding module position)

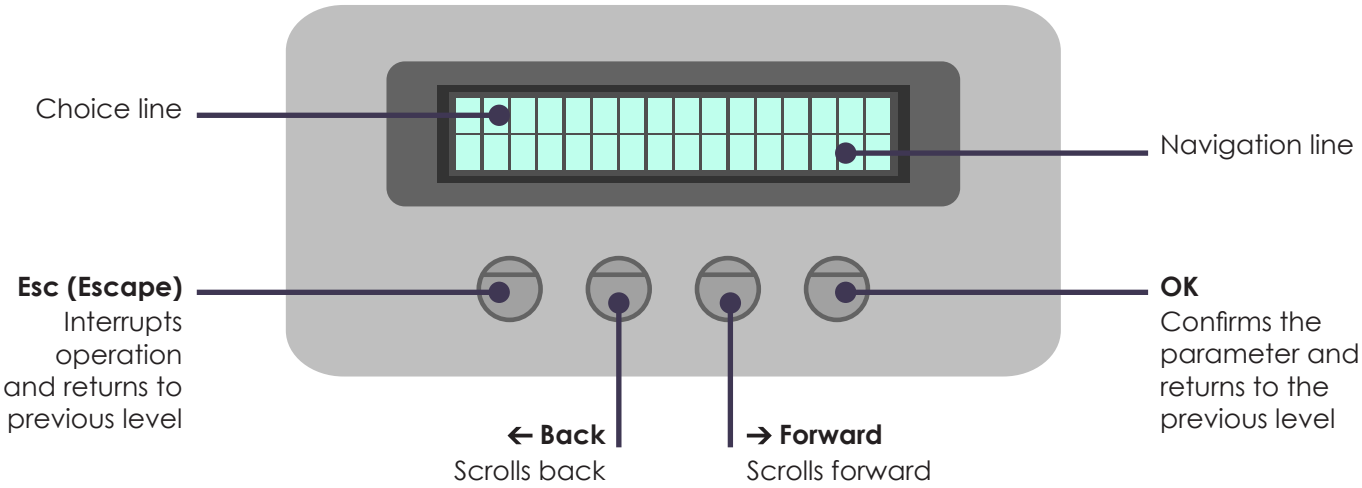
When running, the information shown varies:

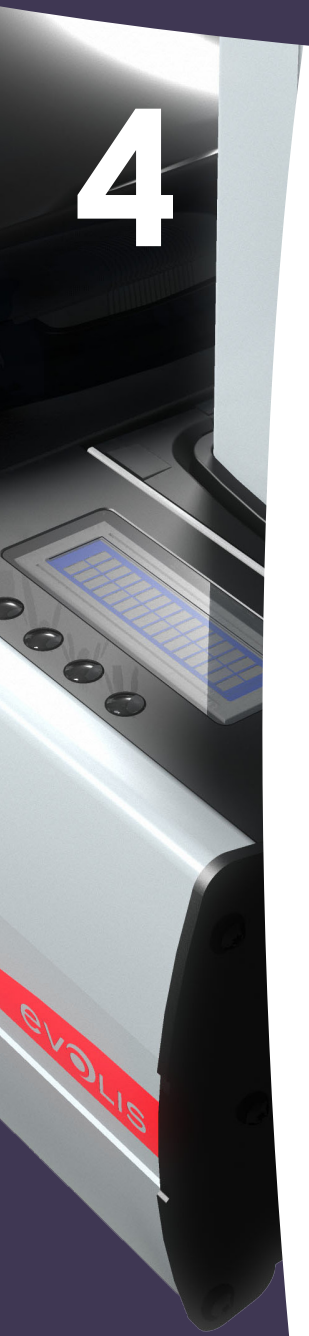
- Upper line - Printing module status
- Lower line - Encoding module status
- Steady green LED - Pending
- Flashing green LED - Data transfer with the PC or printing in progress
- Fixed or flashing red LED, warning or error message display



In the event of operator intervention activating the menu, the LCD unit is converted into a dialogue and configuration support interface. The lower line of the display unit is used to show the function of the control panel buttons at any time within a context-based menu.

Generally speaking, unless otherwise indicated, navigation works as follows:

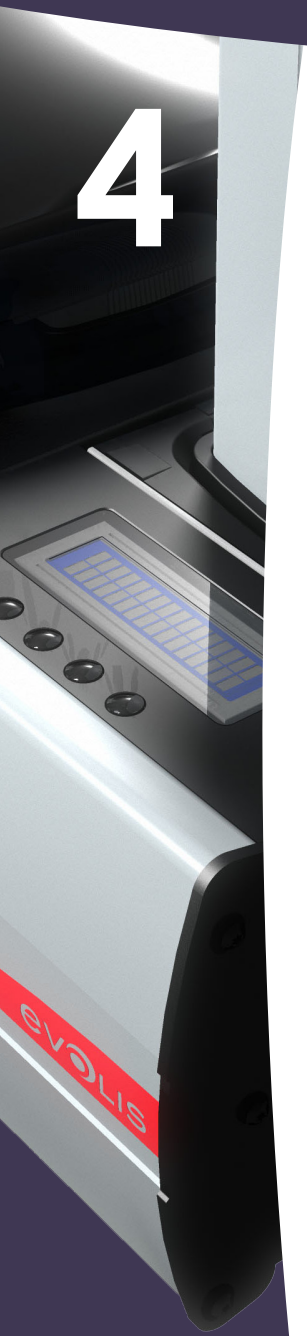




4-2 Warnings and diagnosis

Although the Evolis printer was designed to work independently, keeping user involvement to a minimum, it may nonetheless prove useful to gain some familiarity with the main warnings.

LCD display	Description	Required action	
Initialisation…	Startup in progress.	*No*	
Ready	The printer is ready to receive your data.	*No*	
Printer Cover Open	The printer cover is open.	**Yes**	Close the cover again. The printer starts up.
Feeder Empty	The card feeder is empty.	**Yes**	Put cards into the feeder.
Output hopper Full	The card output hopper is full.	**Yes**	Empty the output hopper.
No Feeder	The card feeder is absent or is not correctly installed.	**Yes**	Check that the feeder is in place.
No Output hopper	The output hopper is absent or is not correctly installed.	**Yes**	Check that the output hopper is in place.
Feeder Almost Empty	The feeder is about 90% empty.	*No*	
Output hopper Almost Full	The output hopper is about 90% full.	*No*	
No Encoding Module	The encoding module is absent or is not correctly inserted.	**Yes**	Check that the encoder module is in place.
Ribbon error	No ribbon in the printer. The ribbon is finished. The ribbon is not correctly fitted. The ribbon is torn.	**Yes**	Check the condition of the ribbon in the printer. If you have a print job in progress, this restarts with a new card.
Cleaning Required	The printer may be cleaned.	**Yes**	See section 3 – Maintenance.
Mandatory Cleaning	The printer must be cleaned.	**Yes**	See section 3 – Maintenance.
Reject hopper full	The hopper containing the rejected cards is full.	**Yes**	Empty the reject hopper. See section 3.
Print Head Error	The printer has detected a problem with the print head. Print jobs are interrupted.	**Yes**	Contact your Evolis dealer to obtain assistance.



LCD display	Description	Required action	
Mechanical Error	The printer has detected a card transport problem in the printing module or turnover area.	***Yes***	Open the equipment cover and remove the ribbon. Remove the jammed card carefully taking care not to damage the printer and its components. Replace the ribbon, close the covers. The printer starts working again. If the problem persists, contact your Evolis dealer for assistance.
Magnetic Error	The magnetic stripe is facing the wrong direction in the feeder. The encoding type is incorrectly configured (HICO or LOCO). The encoded data does not comply with ISO 7811 standards or with the predefined settings in the print driver properties.	***Yes***	Refer to section 1-4 of this manual for further information. Press the control button for one second. The printer will restart the magnetic encoding cycle with a new card. If the problem persists, call your Evolis dealer for assistance.
Cooling…	Cooling of the current printing module.	*No*	
Printing...	Printing in progress.	*No*	
Encoding…	Encoding in progress.	*No*	
Downloading...	Loading Firmware in progress. To permit correct execution of this operation do not disconnect the printer or the PC.	*No*	
Restarting…	The printer is restarting following firmware loading.	*No*	
Waiting…	Waiting for the end of processing.	*No*	
Cleaning...	Cleaning procedure execution in progress.	*No*	
Processing...	The printer is receiving data.	*No*	

4-3 Diagnosis help

In this section, you will find all the information you need to carry out a few simple checks that you may be asked to run by your Evolis dealer to help you as effectively as possible.

4-3a PRINTING A TEST CARD

We recommend that you print a test card to ensure that your printer is working properly. This card shows various technical details for future reference. You may be asked for these by your dealer.

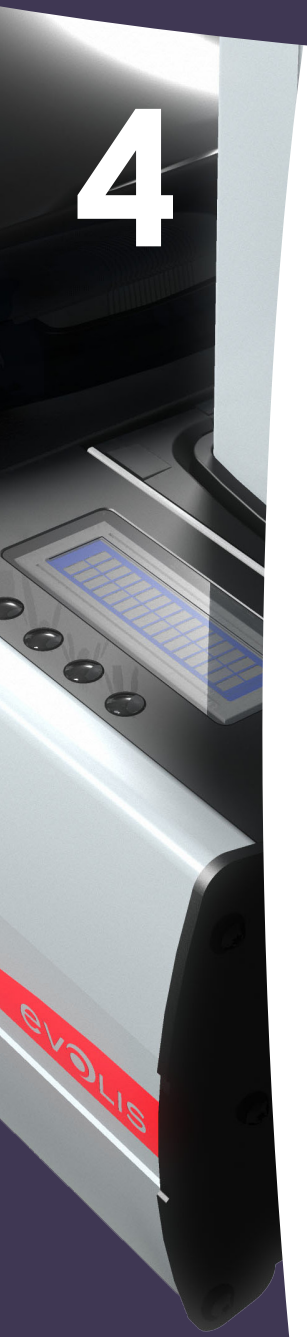
➤ Printing a test card

1. Wait for any current print jobs to finish.
2. Make sure that a ribbon is installed and that there is a blank card in the feeder.
3. Enter the display menu by pressing one of the keys.
4. Press the key to scroll through the menu selections until the **SERVICE** selection is displayed, then confirm with **OK**.
5. Press the key to scroll through the menu until the **TEST CARD** menu is displayed, then confirm with **OK**.
6. The Self-test selection will be displayed. Confirm with **OK** to start printing the test card.
7. The test card will be printed in a few seconds.
8. It will provide you with information such as the printer model and serial number.
9. The printed card will be ejected into the reject hopper.

➤ Information about the test card

A test card:

- Confirms the printing quality in colour and monochrome
- Confirms proper ribbon synchronisation
- Displays the printer model
- Displays the printer's serial number



4-3b IDENTIFYING INSTALLED SOFTWARE VERSIONS (under Windows 7)

As previously shown, you can easily identify the version of the software embedded in your printer (firmware number) by means of the test card.

You can also identify the version of the print driver installed as follows:

1. From the **Start** (Windows logo) button found bottom left on the Windows task bar, select **Peripherals and printers**.
2. Select your printer and double click.
3. From the **Printer** menu, select **Properties**.
4. Go to the **Graphics** tab and then click the **About** button.

4-4 Troubleshooting

Do not attempt to use tools or other items to repair your printer in the event of problems, in case major damage is caused.

4-4a PRINTING PROBLEMS

➤ No printing

1 Check the print driver

Check that there is a print driver for your printer in the Windows configuration.
Check that the printer is selected as the default printer.

2 Check the printer's power supply

Check that the power cable is correctly connected to the printer and to a working electrical socket.
Check that the printer is on and that the push button is lit.
Make sure you are using the power supply unit supplied with the printer.

3 Check the USB cable

Check that the USB cable is connecting the printer to your computer.

4 Check the ribbon

Check that the ribbon is fitted correctly and that the cover is closed.

5 Check the cards

Check that there are cards in the card feeder.
Check that no cards are jammed in the printer.

6 Print a test card

See elsewhere in this section for the procedure to be followed.

➤ Blank card ejected

1 Check the ribbon

Check that the ribbon is not finished or damaged. Replace it or re-install it if necessary.

2 The print head may be damaged

Print a test card.

If the test card does not print, contact an Evolis dealer for technical support or visit the website at **www.evolis.com**.

➤ Poor print quality

Small blemishes on the card

- **The card surface may be dirty.**
  Check that your cards are perfectly clean.
  Use new cards.

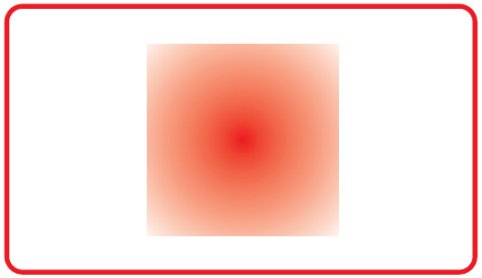
- **Cleaning rollers or print head clogged.**
  Clean the cleaning rollers and print head.

Horizontal white lines

- **The ribbon is not fitted correctly.**
  Check that the ribbon is correctly positioned in the printer.
  Check that there are no wrinkles on the ribbon surface.

- **Print head dirty or damaged.**
  Clean or replace the print head.

Blurred image



- **The ribbon is not fitted correctly.**
  Check that the ribbon is correctly positioned in the printer.

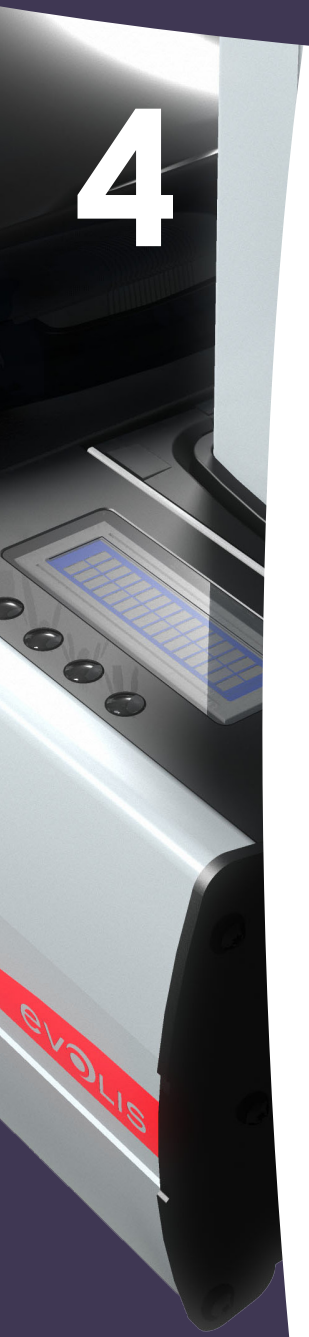
- **Poor ribbon synchronization.**
  Open and close the printer cover to synchronize the ribbon.

- **Dirty printer or cleaning rollers.**
  Clean the printer or the cleaning roller.

- **Use of incompatible cards.**
  Check that the cards used match the specifications.

NOTE

We recommend that you obtain your cards from an Evolis dealer.
Use of cards obtained elsewhere is liable to adversely affect print quality and/or damage the print head.



➤ Partial or incorrect printing

❶ Check the print settings

Check that no area of the card design to be printed is outside the print margins.
Check the document orientation (portrait or landscape) in the print driver configuration.

❷ Check the interface cable

If irregular characters are printed, check that you are in fact using the USB cable supplied with your printer.
Check the connection between the computer and the printer.
Try using another cable of the same type.

❸ Check that the printer is clean

Clean the printer, especially the cleaning rollers.
See the maintenance section.

❹ Check that the cards are clean

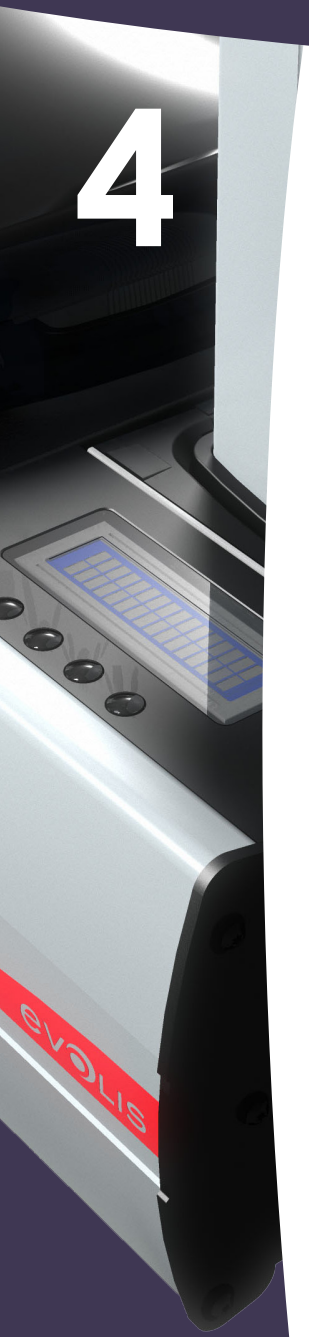
Store your cards protected from dust.

❺ Check the ribbon

Check that the ribbon is fitted correctly.
Check that the ribbon spools freely.

❻ Check the print head

Should horizontal straight lines appear on printed cards, it is likely that the print head is dirty or damaged.
See the section on maintenance and troubleshooting. If the problem persists, contact an Evolis dealer or visit the website at **www.evolis.com**.



4-4b FREEING JAMMED CARDS

Control panel display – **MECHANICAL ERROR** – Print jobs are interrupted.

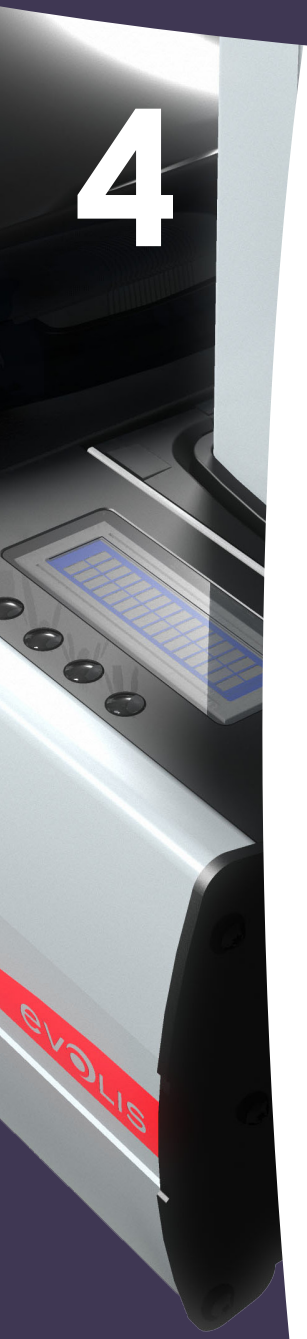
Do not turn your printer off, as this cancels pending print jobs in the printer's memory.

Remove the card as follows:

1. Open the printer cover and remove the ribbon.
2. Press the push button on the control panel to turn the card transport rollers. If the card is still stuck inside the printer, slide it manually towards the printer output. If there is more than one card, always push the top one first.
3. Replace the ribbon, then close the printer cover.

To prevent card jams:

1. Check that the thickness of the cards used matches the specifications set out in Appendix A *"Technical specifications"* in this manual.
2. Check that the cards are flat. Keep them in a horizontal position.
3. Check that the cards are not stuck together. Shuffle the cards before loading them.



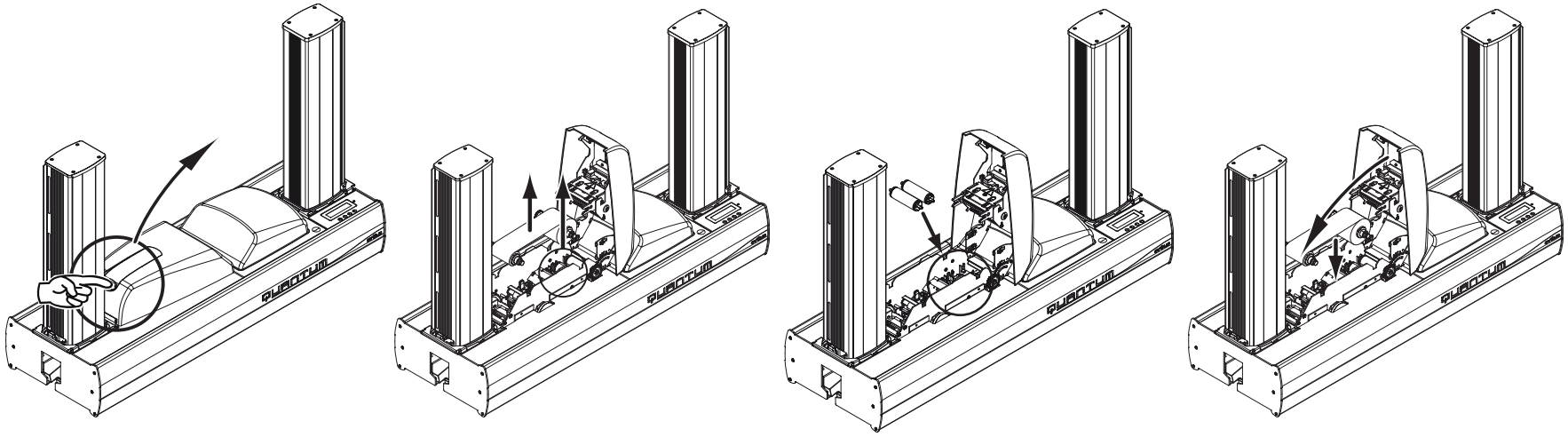
4

4-4c REPLACING THE CLEANING ROLLERS

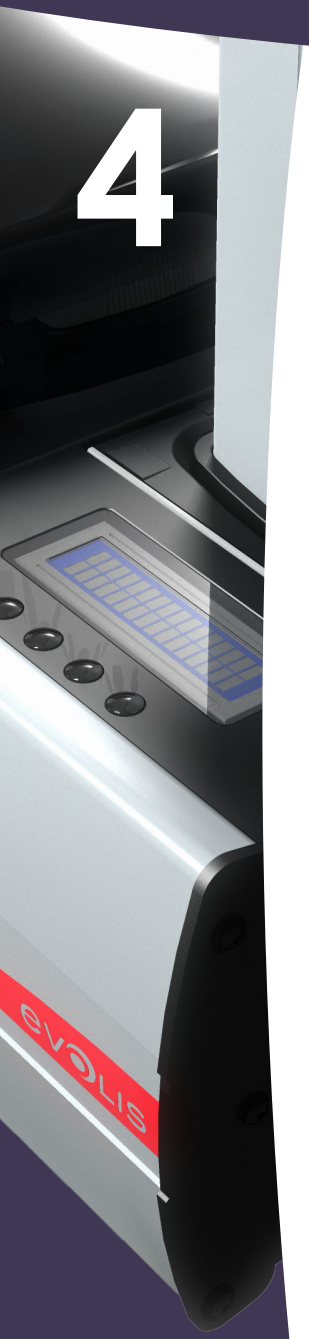
Should your cleaning rollers start to work less effectively despite regular maintenance, it is advisable to replace them in order to avoid dirt accumulating on the print head, resulting in permanent damage (See section 3 – Maintenance).
The cleaning rollers are available as a consumable from your Evolis dealer.

Roller replacement procedure:

1. Open the printer cover.
2. Remove the ribbon if any then locate the cleaning roller and release it from its housing.
3. Fit the new roller in the printer, ensuring that it is correctly positioned in the housing.
4. Replace the ribbon and then close the printer cover.



1 2 3 4



4-4d REPLACING THE PRINT HEAD

The print head is a sensitive component of your equipment. It determines the print quality, and regular servicing along with an immediate environment free from dust or other particles ensure a lengthy useful life. Nonetheless, the print head may sometimes need to be replaced. Evolis has designed a unique device enabling users to undertake such replacement with no tools needed, simply by following the instructions very carefully.

Before doing anything else, please contact your Evolis dealer in order to check the advisability of replacing the print head. The dealer will supply a new print head if need be.

Evolis has set up a scheme for exchanging defective print heads during the printer's warranty period. Your equipment is eligible under the scheme if:

- **You use only Evolis consumables (ribbons and maintenance products).**
- **You have followed the cleaning and servicing cycles scrupulously.**
- **You are working in a dust-free environment complying with the technical specifications.**
- **You are using flat cards, with no rough patches which could damage the print head surface.**

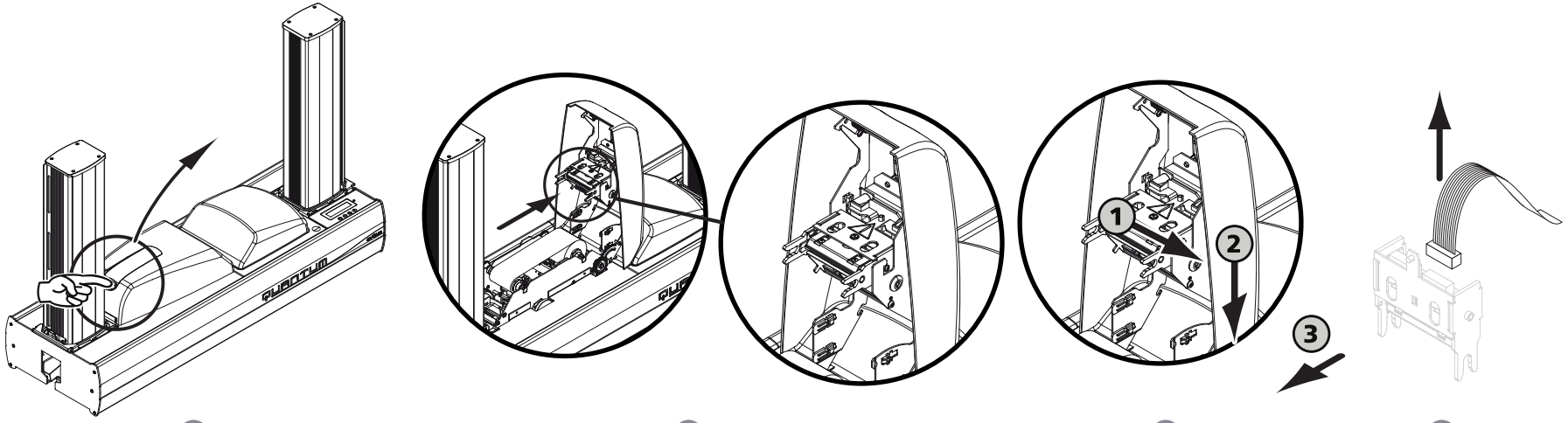
Please refer to the warranty conditions for further information.

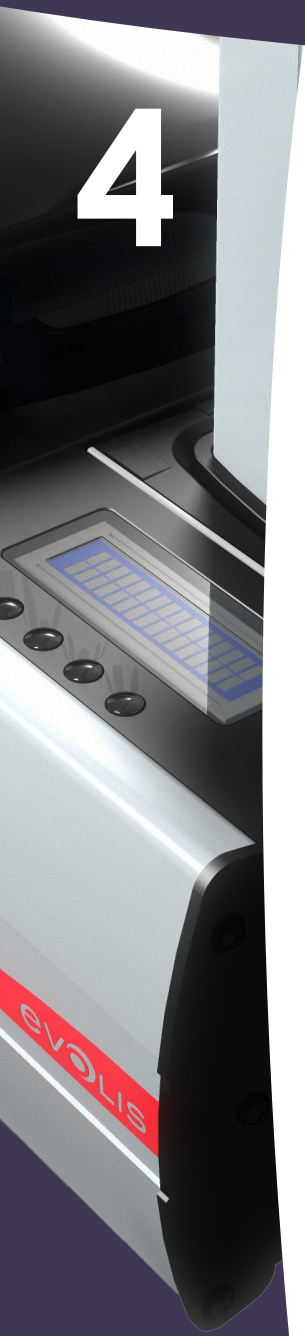
To exchange the print head, please proceed as follows:

Before changing the print head, please unplug the power cable.

➤ Step 1 - Removing the defective print head

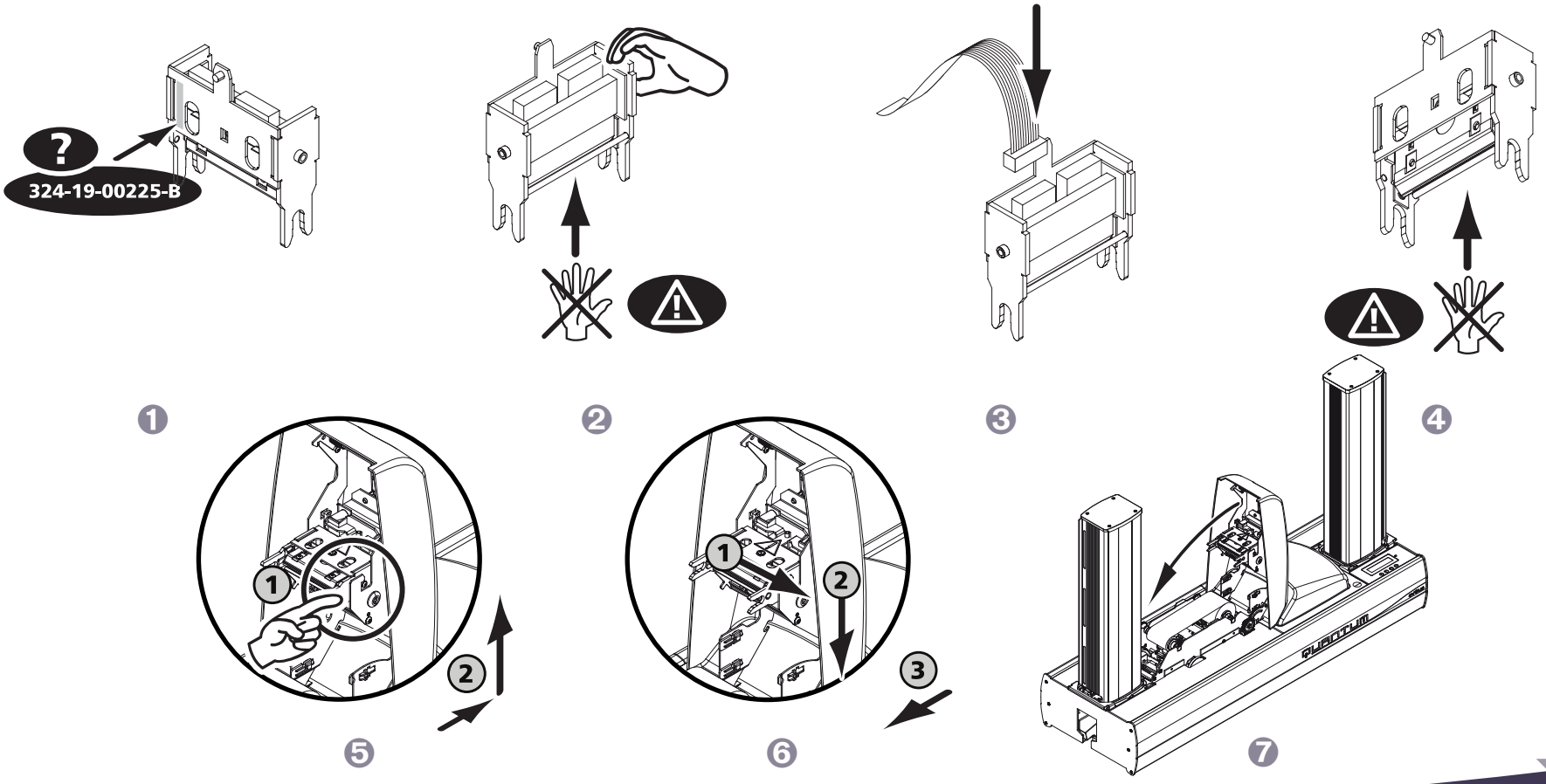
1. Open the printer cover.
2. Locate the print head.
3. Press on the plastic part found at the bottom as shown on the diagram, in order to free the lugs from the retaining fork, then remove the lugs from their slots.
4. Tilt the head carefully and disconnect the connector linked to the cable without using force on the mechanism.

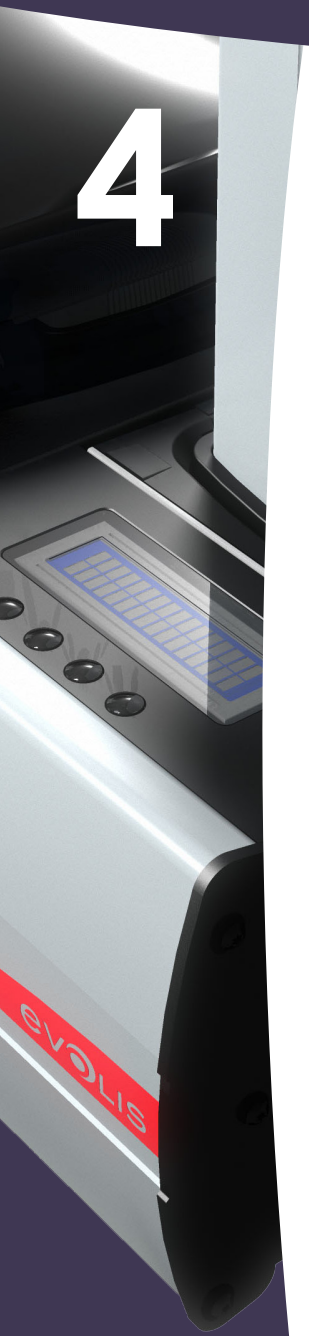




➤ Step 2 - Installing the new print head

1. Note the code shown on the white label stuck on the print head. You will be asked for this code in Step 3.
2. Pick up the new print head and turn it towards you, with the white connector visible.
3. Connect the cable into its socket, making sure it is the right way round. Do not use any force, as this part is relatively fragile.
4. Turn the head so that the logo is visible (be careful), the connector can no longer be seen.
5. Insert the head vertically between the two guides so that the fork lugs are held within the slot.
6. The head is back in position.
7. Close the cover. The print head is now fitted.





➤ Step 3 - Configuring the new print head

1. Power up the printer and check that it is properly connected to a computer on which the printer's print driver is installed.
2. In the print driver's Properties, click on the "**Tools**" tab.
3. In the "**Printer dialogue**" section, enter the following command: **Pkn;x**

where x = the print head kit code number that you noted in Step 2.
Example: if the print head kit number is: 179-004-00048, the command to be entered is: Pkn;179-004-00048

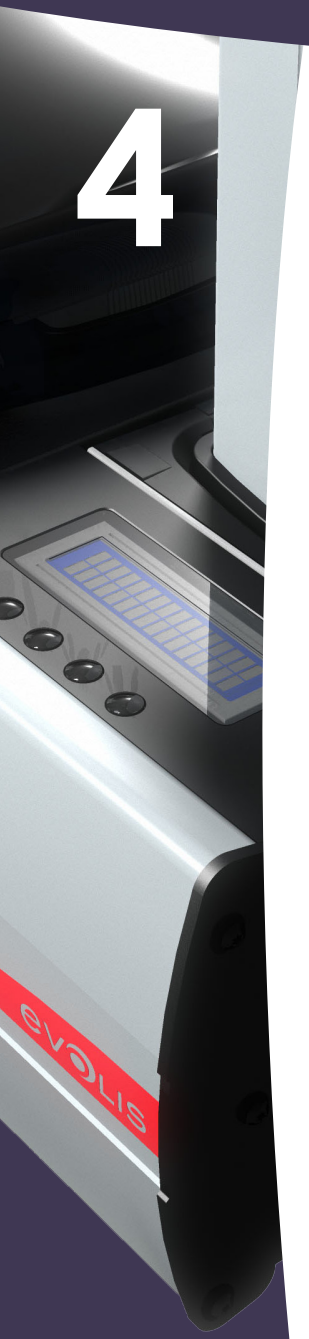
If the print head kit number is not entered correctly, printer malfunctions may occur and the warranty may be voided.

➤ Step 4 - Cleaning the printer

On your printer's control panel – **CLEANING** – is shown.

Cleaning is absolutely necessary after changing the print head. No print jobs can be run until the cleaning operation has finished.
Refer to section 3 – Maintenance to carry out cleaning.

Also service the cleaning roller and then replace the cards and ribbon.
Once cleaning has been carried out, your printer is once again ready to customize your cards.



4-4e UPDATING THE FIRMWARE (under Windows)

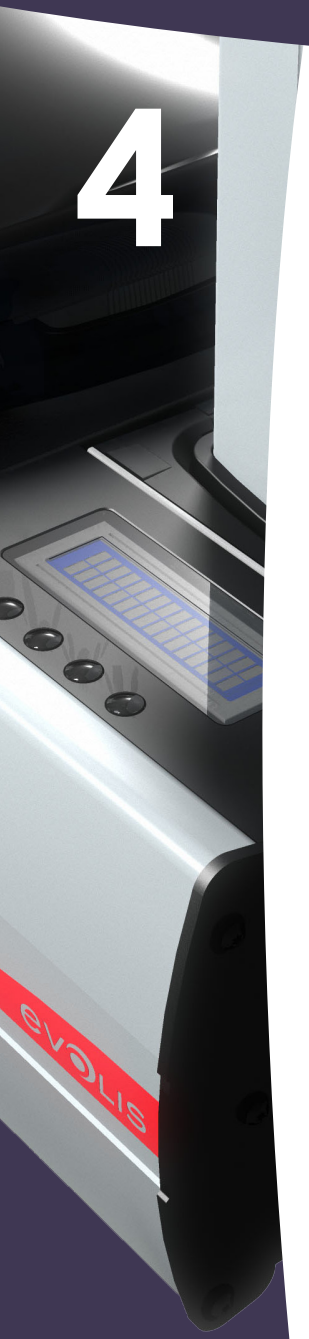
Updating the firmware is a simple operation but one which, if not properly completed, can result in your printer breaking down.
Before any update, please contact your Evolis dealer who will be able to guide you on the advisability or otherwise of carrying out an upgrade. In general, such updates are only required in the event of a problem or malfunction that has been clearly identified by your Evolis dealer.

An update can be downloaded from the website at www.evolis.com :

1. Enter the Support & Drivers menu, then select your printer model and click the **Printer Drivers and Firmware** link.
2. Then click on the file for the corresponding **Firmware**.
3. Accept the download and save the file in a directory on your hard drive. The firmware is stored compressed as a Zip file, which you will need to extract.
4. Then double-click on the file in the directory in order to run the Firmware installation program.
5. When prompted by the program, click the **Download** button to start the operation. The Firmware download is in progress.
6. After about thirty seconds, the Firmware has transferred to the printer and the operation is complete.
7. If the printer is not showing a 'READY' status, this means that the update has not been carried out correctly or, possibly, that the printer is not working properly. Check the connection cables and run a new update.

The update is complete, and your equipment is ready to customise your cards.

Never interrupt the transfer between computer and printer during the download phase (powering off the printer or computer, unplugging a cable). This would result in a complete inability to restart the printer. Should such an incident occur, please contact your Evolis dealer, who will replace your printer's processor board.



4

4-4f UPDATING THE PRINT DRIVER

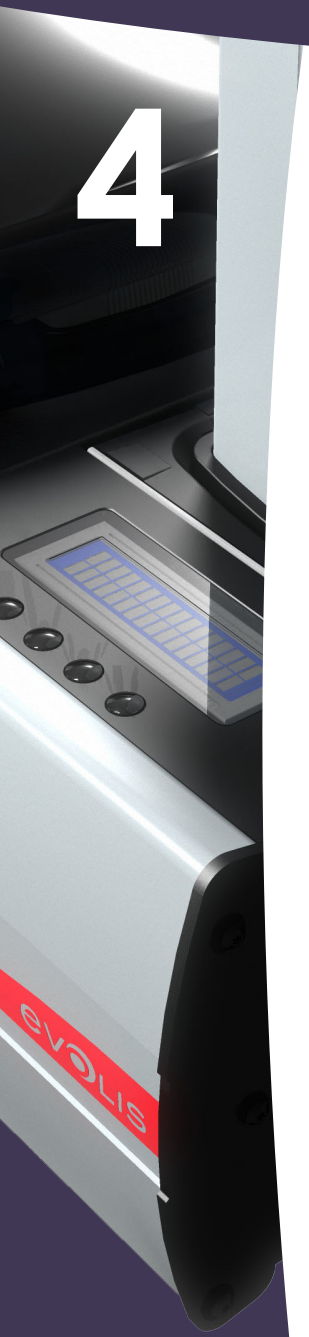
Updating the print driver is a task that is required in order to fix malfunctions or gain the benefit of new options.

Before any update, please contact your Evolis dealer who will be able to guide you on the advisability or otherwise of carrying out an upgrade.

An update can be downloaded from the website at www.evolis.com :

1. Enter the Support & Drivers menu, then select your printer model and click the **Printer Drivers and Firmware** link.
2. Then click on the file for the corresponding print driver.
3. Accept the download and save the file in a directory on your hard drive. The firmware is stored compressed as a zip file, which you will need to extract.
4. Then double-click on the setup.exe file that you have just downloaded in order to run the installation program.

For more details about the procedure, please see the Installing the print driver section.



4

4-5 Technical support

If you are having difficulties in configuring and using your printer, read this manual carefully.
If you do not manage to solve your problem, you can obtain further information and help from the Evolis partner network.

4-5a EVOLIS PARTNER NETWORK

For any unresolved technical problem, contact an Evolis dealer. If you do not know any Evolis dealers, visit the **www.evolis.com** website and send us your question. Evolis will pass on the contact details of your nearest Evolis dealer. When calling an Evolis dealer, you need to be close to your computer and ready to provide the following information:

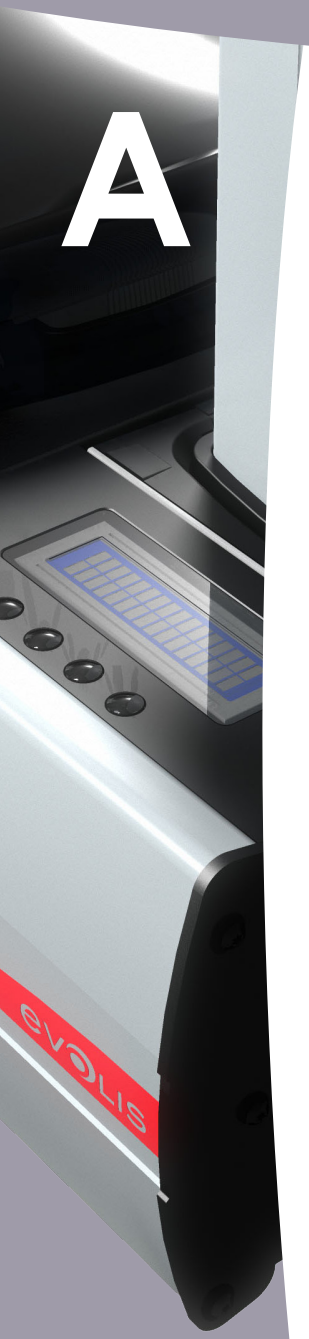
1. Your printer model and serial number
2. The configuration and operating system that you are using
3. A description of the incident that has occurred
4. A description of the steps that you have taken to resolve the problem.

In addition, to enable you to find answers to your questions 24/7, the **www.evolis.com** website includes a number of aspects related to day-to-day use of your printer.

4-5b FINDING INFORMATION ON WWW.EVOLIS.COM

If you need additional technical help, you will find a great deal of information on using and troubleshooting Evolis printers in the **Drivers and Support** section on the Evolis website **www.evolis.com**.
This section offers downloads of the latest versions of firmware, print drivers and user manuals, videos about using and maintaining Evolis printers, and an FAQ* section giving answers to the most frequently asked questions.

**FAQ:* *Frequently Asked Questions*



Appendix A

A1 - Technical specifications

This section presents your printer's technical printing properties.

➤ General characteristics

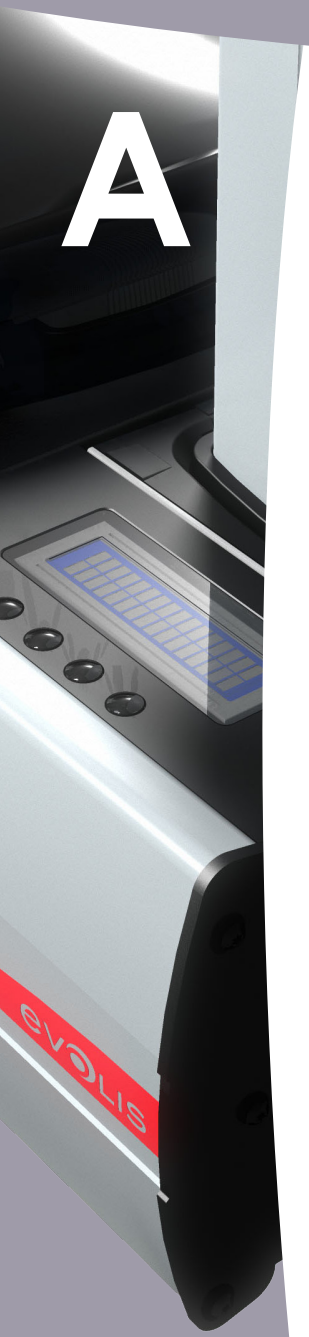
- Colour printing module
- 300 dpi print head (11.8 dots/mm)
- Complete locking system as an option to prevent any access to blank cards, ribbons, films and defective cards
- USB connection & Ethernet TCP-IP connection
- 16 MB RAM allowing two colour cards (front and back) to be stored
- Card turnover area for double-sided printing
- Detachable and interchangeable card input feeder and output stack with 500 cards (0.76 mm or 30 mil) capacity
- Reversible encoding module
- Two-line LCD control panel and status LED
- Reject hopper with a capacity of 20 cards (0.76 mm or 30 mil)
- Aluminium & black in colour

➤ Printing modes

- Colour sublimation and monochrome thermal transfer
- Advanced colour management system for top-quality photographs
- Edge-to-edge printing
- Double-face printing
- Integrated ribbon saving for monochrome printing

➤ Encoding module

- Reversible upper and lower encoding unit for magnetic stripes and contact smartcards
- ISO 7811 HiCo/LoCo or JIS2 magnetic stripe encoder
- Smart contact station - ISO 7816-2
- Connection zone and fixing support for user integration of any encoder type
- Available options:
  - Smartcard encoder – PC/SC, EMV 2000-1
  - Contactless card encoder - ISO 14443A, B, ISO 15693, Mifare, DesFire, HID iCLASS
  - Other specific encoders on request



➤ Performance

- Colour 1 face (YMCKO), over 150 prints / hour
- Colour 2 faces (YMCKO-K), over 115 prints / hour
- Monochrome 1 face full card, over 1,000 prints / hour
- Monochrome 2 faces full card, over 320 prints / hour

➤ Supported platforms

- WindowsTM XP, and Vista, 32 & 64 bits
- Macintosh™ OS X 10.4 and higher.
- Linux (on request)

➤ Software supplied

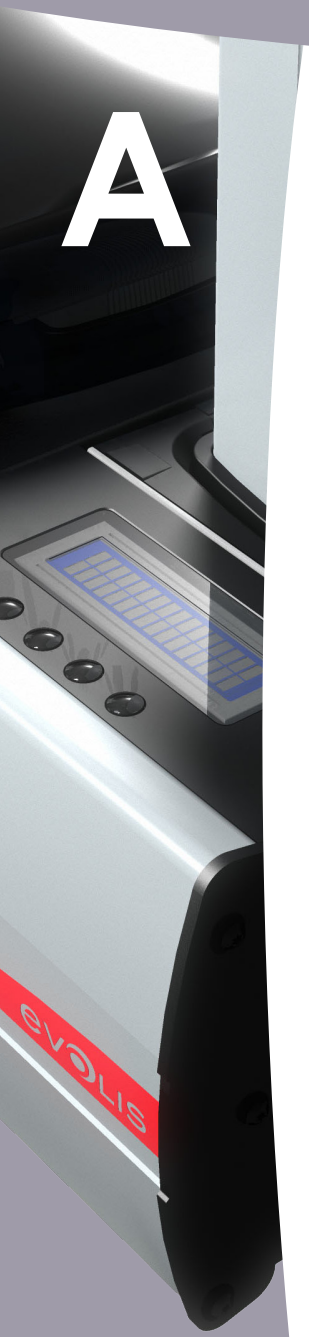
- eMedia Card Designer for designing and printing badges:
  - Compatible with WindowsTM 2003, XP, Vista and 7
  - Connects to Microsoft Excel databases

➤ Ribbon types

- 2-panel KO monochrome black ribbon - 500 prints / roll
- 5-panel YMCKO colour ribbon - 500 prints / roll
- 6-panel YMCKO-K colour ribbon - 500 prints / roll
- Half panel YMCKO colour ribbon - 400 prints / roll
- Monochrome black ribbon – up to 3,000 prints / roll
- Monochrome ribbons - up to 1,000 prints / roll: available in red, green, blue, white, black, gold and silver
- Special ribbons: hologram clear overlay - 350 prints / roll, scratch-off ink - up to 1,000 prints / roll, BlackWAX - up to 1,000 prints / roll

➤ Options

- Production pack comprising 1 detachable card feeder, 2 cleaning rollers and one cleaning kit (50 cards, 25 swabs, 60 wipes)
- Security pack comprising 1 print head, 1 reversible encoding module, one detachable card feeder
- 500-card additional card feeder



➤ Warranty

For best results and to lengthen the useful life of your printer, use original 'Evolis High Trust®' consumables.

- Printer and print head: 1 year warranty [2], limited to 500,000 cards inserted.

Card types: PVC and composite PVC cards, PET, ABS[1] and special clear overlay cards[1]

Card format: ISO CR-80 - ISO 7810 (53.98 mm x 85.60 mm - 3.375'' x 2.125'')

Card thickness: From 0.76 mm (30 mil) to 1 mm (40 mil)

Card feeder capacity: 500 cards (0.76 mm-30 mil)

Output hopper capacity: 500 cards (0.76 mm-30 mil)

Dimensions:

Without card feeders: 215 mm (H) x 850 mm (L) x 300 mm (W)

With card feeders: 567 mm (H) x 850 mm (L) x 300 mm (W)

Weight: 21.7 Kg (47.8 lbs)

Connections: USD port (cable supplied). Ethernet TCP/IP port

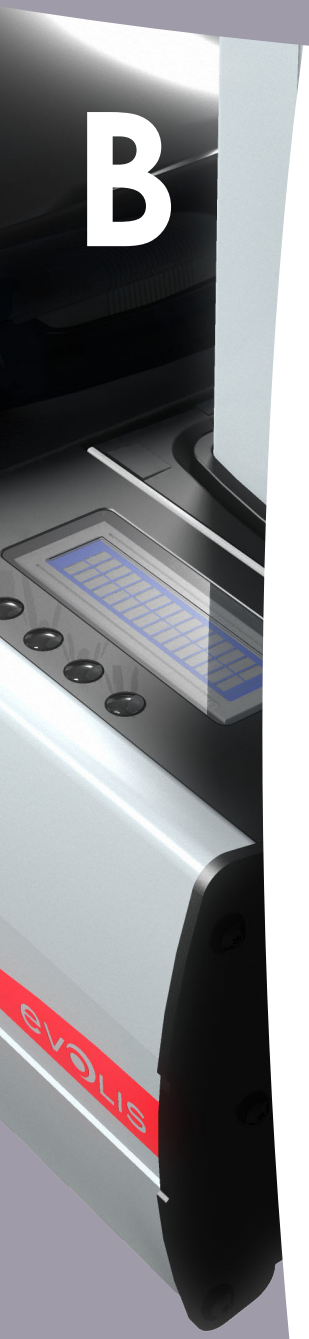
Power supply: Power supply unit: 100-240 V AC, 50-60 Hz, 2 A – Printer: 24 V DC, 6.25 A

Environment:

- Min/max operating temperature: 15° / 30°C (59° / 86° F)
- Humidity: 20% to 65% non-condensing
- Min/max storage temperature: -5° / +70°C (23° / 158° F)
- Storage humidity: non condensing from 20% to 70%
- Ventilation in operation: free air

[1] Under specific conditions.

[2] Warranty subject to strict compliance with specific usage and maintenance conditions and the use of Evolis High Trust® consumables



Appendix B

B1 - Compliance statements

In this section, you will find the certifications for your Evolis printer.

B1 - Compliance statements

Safety and Electromagnetic Compatibility

Manufacturer name:	Evolis Card Printer
Manufacturer address:	14, avenue de la Fontaine Z.I. Angers Beaucouzé 49070 Beaucouzé, France
Equipment name :	Quantum2
Year of manufacture :	2009

I, the undersigned,
Mr **Serge Olivier**,
hereby declare that the equipment named above, used and installed in accordance with the notice, complies with the essential requirements of Directives 2006/95/EC and 2004/108/EC by application of the following standards:

EN 60950-1 of 2006 + A11
EN62311 of 2008
EN 55022 of 2006 + A1
EN 61000-3-2 of 2006
EN 61000-3-3 of 1995 + A1 + A2

Full name: Serge Olivier
Position: Technical director
Date: July 2009

Signature:

This is a Class A device. Operation of this equipment in a residential area may cause interference to radio communications. Should this occur, the user may be asked to take appropriate measures.

EUROPE - Norway Only : This product is designed for an IT power system with phase-to-phase voltage 230V. Earth grounding is via the polarized, 3-wire power cord.
FI: “Laite on liitettävä suojamaadoitus koskettimilla varustettuun pistorasiaan”
SE: “Apparaten skall anslutas till jordat uttag”
NO: “Apparatet må tilkoples jordet stikkontakt”

FCC Federal Communications Commission notice

Radio frequency interference in the United States

The Quantum2 model complies with the following specification: FCC Part 15, Subpart A, Section 15.107(a) and Section 15.109(a) Class A Digital device.

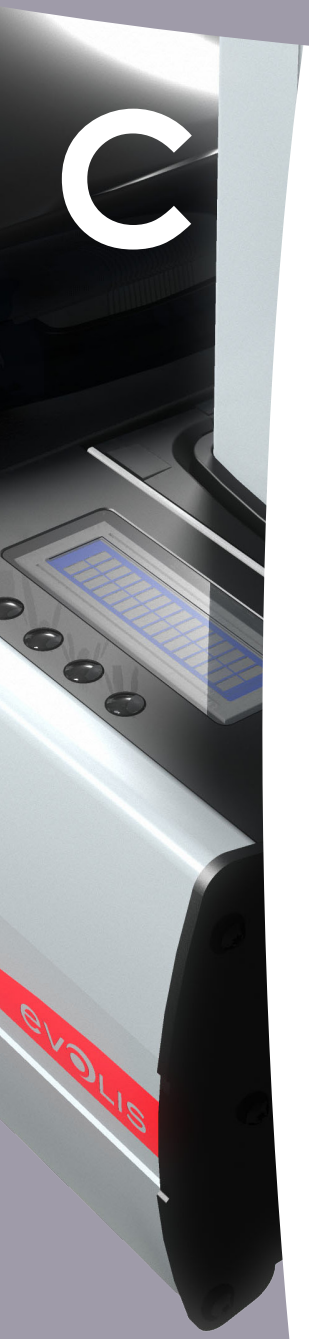
Additional information:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to
Part 15 of the FCC Rules. These limits are intended to ensure reasonable protection against harmful interference in a professional installation. This equipment generates, uses and can emit high frequency energy and, if it is not installed and used in accordance with the instructions in the user manual, risks causing harmful interference to radio communications.
However, it is not guaranteed that this interference will not occur in a residential installation.
If this equipment causes harmful interference to radio or television transmissions, (which can be determined by switching it successively on and off), the user is invited to eliminate this interference at his expense.
Use of a shielded twisted pair cable is necessary to comply with the restrictions laid down by part 15 of the
FCC Rules for Class A digital devices.
Pursuant to Part 15.21 of the FCC Rules, any changes or modifications made to this equipment without the express written consent of Evolis Card Printer may cause harmful interference and void the FCC authorisation to operate this equipment.

Japanese radio frequency interference (VCCI)

This equipment is Class A information technology equipment based on the rules laid down by the Voluntary Control Council For Interference by Information Technology Equipment (VCCI). Its use in or close to a residential area may cause radio interference. in which case, you must take appropriate steps.

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＡ情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。



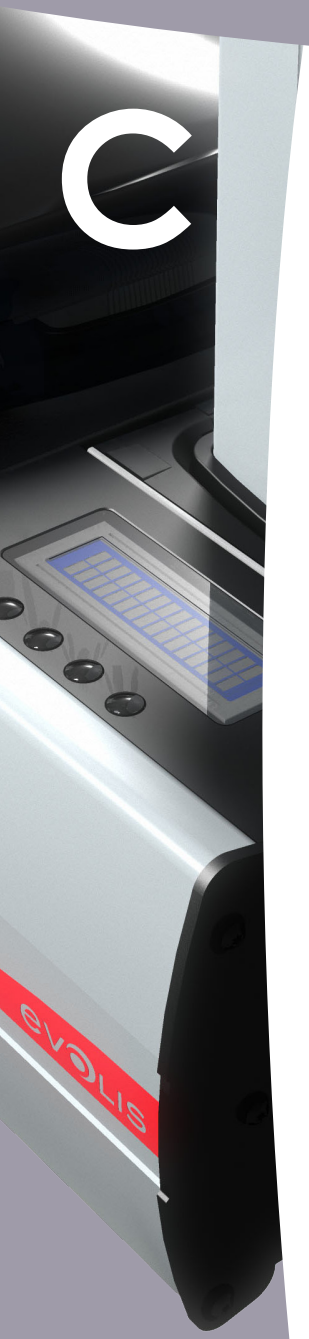
Appendix C

C1 - Consumables and accessories

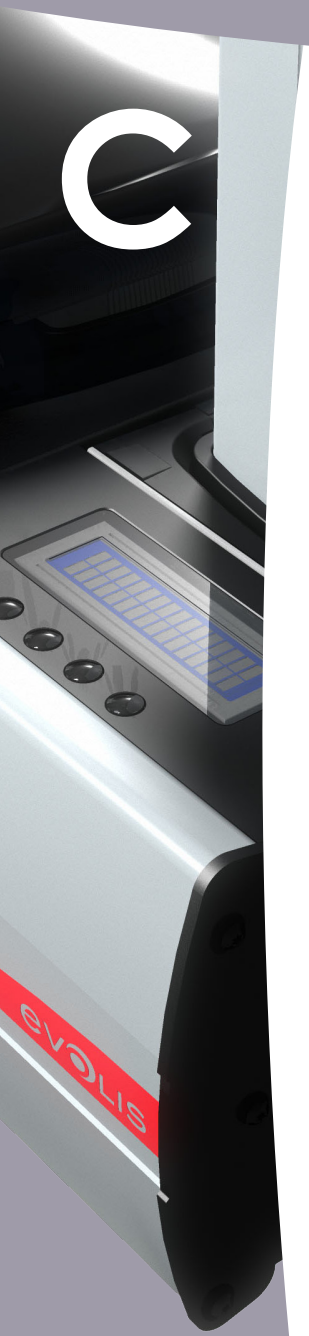
Evolis offers a full range of consumables and accessories specially designed to work with its printers. Tested and approved by the Evolis R&D and Quality departments, these consumables and accessories provide optimum print quality and reliability.

➤ Ribbons

Ref.	Description		Tattoo RW	Tattoo2	Zenius	Pebble4	Dualys3	Securion	Quantum2
Monochrome Ribbons									
R3012	KO (black + clear overlay)	500 prints/roll				●	●	●	●
R2211	Black	Up to 600 prints / roll		●					
R2212	Blue	Up to 600 prints / roll		●					
R2213	Red	Up to 600 prints / roll		●					
R2214	Green	Up to 600 prints / roll		●					
R2215	White	Up to 500 prints / roll		●					
R2216	Metallic Gold	Up to 500 prints / roll		●					
R2217	Metallic Silver	Up to 500 prints / roll		●					
R2011	Black	Up to 1,000 prints / roll				●	●	●	●
R2012	Blue	Up to 1,000 prints / roll				●	●	●	●
R2013	Red	Up to 1,000 prints / roll				●	●	●	●
R2014	Green	Up to 1,000 prints / roll				●	●	●	●
R2015	White	Up to 1,000 prints / roll				●	●	●	●
R2016	Metallic Gold	Up to 1,000 prints / roll				●	●	●	●
R2017	Metallic Silver	Up to 1,000 prints / roll				●	●	●	●
R2131	Black	Up to 3,000 prints / roll							●

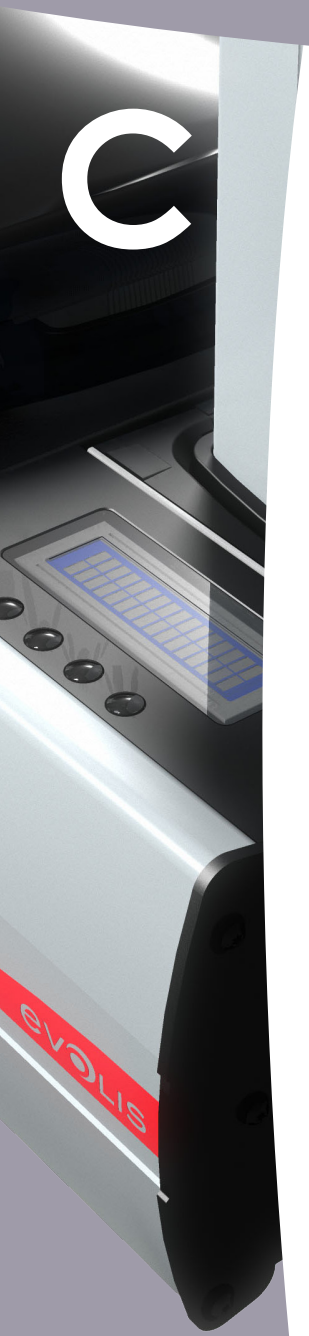


Ref.	Description		Tattoo RW	Tattoo2	Zenius	Pebble4	Dualys3	Securion	Quantum2
Monochrome Ribbons									
RCT011XXX	Black	1,000 prints/roll			●				
RCT012XXX	Blue	1,000 prints/roll			●				
RCT013XXX	Red	1,000 prints/roll			●				
RCT014XXX	Green	1,000 prints/roll			●				
RCT015XXX	White	1,000 prints/roll			●				
RCT016XXX	Metallic gold	1,000 prints/roll			●				
RCT017XXX	Metallic silver	1,000 prints/roll			●				
R2F009XXX	KO (black + clear overlay)	300 prints/roll			●				



Ref.	Description		Tattoo RW	Tattoo2	Zenius	Pebble4	Dualys3	Securion	Quantum2
Colour ribbons									
R3011	YMCKO	200 prints/roll				●	●	●	●
R3013	½ YMCKO	400 prints/roll				●	●	●	●
R3314	YMCKOK	200 prints/roll					●	●	●
R3411	YMCKO	100 prints/roll		●					
R3511	YMCKO	500 prints/roll							●
R3514	YMCKOK	500 prints/roll							●
R5F001XXX	YMCKO	100 prints/roll			●				
R5H004XXX	1/2 YMCKO	400 prints/roll			●				
Special ribbons									
R2219	BlackWAX*	Up to 1,000 prints / roll		●					
R2018	Scratch-off ink	Up to 1,000 prints / roll				●	●	●	●
R2019	BlackWAX*	Up to 600 prints / roll				●	●	●	●
R2030	Signature panel	Up to 1,000 prints / roll				●	●	●	●
R2139	BlackWAX*	Up to 3,000 prints / roll							●
R4002	Design Genuine Globe* holographic clear overlay	Up to 350 prints / roll				●	●	●	●
RCT018XXX	Scratch-off ink	1,000 prints/roll			●				
RCT021XXX	Signature panel	1,000 prints/roll			●				
RVA022XXX	Genuine Globes hologram ribbon	400 prints/roll			●				

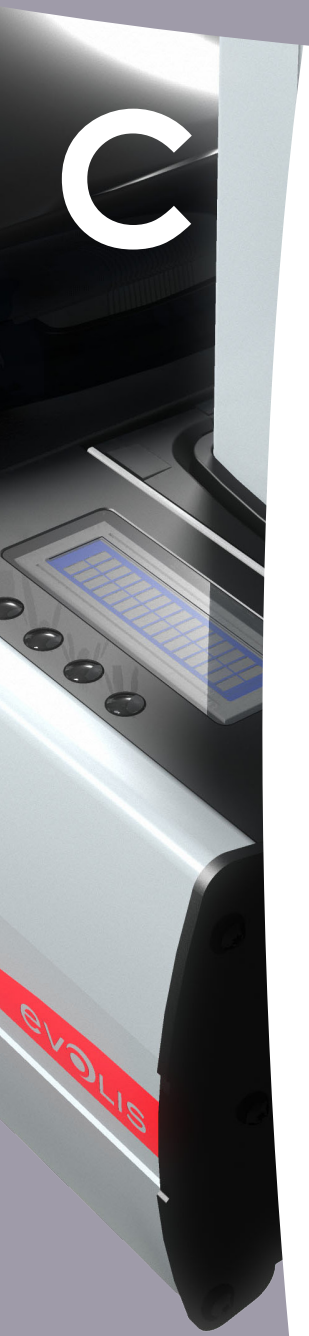
* for printing on ABS, special overlay and paper



➤ Cards

Ref.	Description		Tattoo RW	Tattoo2	Zenius	Pebble4	Dualys3	Securion	Quantum2
Plastic cards and accessories									
C4001	Blank PVC cards, Standard, 0.76 mm	5 packets of 100 cards		●	●	●	●	●	●
C4002	Blank PVC cards, Standard, 0.50 mm	5 packets of 100 cards		●	●	●	●	●	●
C4003	Blank PVC cards, Standard, with HICO mag stripe 0.76 mm	5 packets of 100 cards		●	●	●	●	●	●
C4004	Blank PVC cards, Standard, with LOCO mag stripe - 0.76 mm	5 packets of 100 cards		●	●	●	●	●	●
C3001	Blank PETF cards, 0.76 mm	500 cards/box		●	●	●	●	●	●
C4512	Blank perforated PVC cards- 5 mm hole - thickness 0.50 mm	100 cards/box		●	●	●			
C4522	Blank PVC cards with writeable reverse	100 cards/box		●	●	●			
A5050	Plastic badge clip perforated with 5 mm hole	100 clips/box		●	●	●			
Paper cards									
C2001	Blank paper cards, 0.25 mm*	5 packets of 100 cards		●					
RW cards									
C5101	Blank RW PVC cards in blue, 0.76 mm	100 cards/box	●						
C5103	Blank RW PVC cards, in blue with HICO mag stripe - 0.76 mm	100 cards/box	●						
C5201	Blank RW PVC cards in black, 0.76 mm	100 cards/box	●						
C5203	Blank RW PVC cards, in black with HICO mag stripe - 0.76 mm	100 cards/box	●						

*use the BlackWAX ribbon for printing on paper cards



➤ Software and accessories

Ref.	Description	Tattoo RW	Tattoo2	Zenius	Pebble4	Dualys3	Securion	Quantum2
Software								
L8001	eMedia Card Designer software, Pro Edition, unrestricted version, all database types	●	●		●	●	●	●
L8002	eMedia Card Designer software, Standard Edition, unrestricted version, Excel database connection	●	●		●	●	●	●
Maintenance kits								
A5011	UltraClean cleaning kit (for full printer cleaning) 5 pre-impregnated cards, 5 swabs, 1 box of 60 pre-impregnated wipes	●	●		●	●	●	●
A5002	PrinterClean cleaning kit (for cleaning the card feed rollers) 50 isopropyl alcohol impregnated cards, delivered in individual sachets	●	●		●	●	●	●
A5003	HeadClean cleaning kit (for cleaning the print head) 25 swabs with foam ends and reservoir with isopropyl alcohol (IPA)	●	●	●	●	●	●	●
A5004	DustClean cleaning kit (for cleaning roller servicing) 1 dispensing box of 60 pre-impregnated, anti-static, cleaning wipes	●	●		●	●	●	●
A5070	LamClean cleaning kit (for cleaning the laminating unit) 10 double-sided adhesive cards						●	
ACL001	Periodic cleaning kit (for servicing the cleaning roller and print head) 5 adhesive cards, 5 swabs			●				
ACL002	Advanced cleaning kit (for a thorough clean of the printer) 2 "T" shaped pre-impregnated cards, 2 adhesive cards, 1 pen, 1 box of 60 pre-impregnated antistatic wipes			●				
ACL003	Adhesive Card cleaning kit (for servicing the cleaning roller) 50 adhesive cards			●				
ACL004	"T" shaped card cleaning kit (for cleaning the card feed rollers) 10 pre-impregnated T cards			●				
ACL005	Pen cleaning kit (for print head cleaning) 3 cleaning pens - use up to 8 times per pen			●				

Ref.	Description	Tattoo RW	Tattoo2	Zenius	Pebble4	Dualys3	Securion	Quantum2
Printer accessories								
S2304BB	Extra card feeder for 100 cards (brilliant blue)	●						
S2304FR	Extra card feeder for 100 cards (flame red)		●					
S5304OC	Extra card feeder for 100 cards (ocean blue)				●	●		
S5304FR	Extra card feeder for 100 cards (flame red)				●		●	
S5304JG	Extra card feeder for 100 cards (jungle green)				●			
S5305OC	Manual card feeder (ocean blue)				●	●		
S5305FR	Manual card feeder (flame red)				●			
S5305JG	Manual card feeder (jungle green)				●			
A5310	Carrying case – Delivered in a cardboard box		●					
A5309	Carrying case – Delivered in a cardboard box				●			
A5306	Carrying bag – Delivered in a cardboard box				●	●		
A5017	1.80m USB cable	●	●	●	●	●	●	●
A5008	Power supply unit	●	●	●	●	●		
A7004	Power supply unit						●	●
A5009	220V power cable - EUROPE	●	●	●	●	●	●	●
A5010	110V power cable - US	●	●	●	●	●	●	●
A5019	220V power cable - UK	●	●	●	●	●	●	●

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